

## Medpace Reference Laboratories Validated Assays 2019

Analyte	Aliases	Category / Therapeutic Area	Method	Sample Type(s)	Stability (Ambient)	Stability (2-8 C)	Stability (-20 C)	Stability (-70 C)
B-cell activating factor	BAFF	Auto Immune	EIA	EDTA Plasma	Unknown	Unknown	Unknown	Unknown
Direct Antiglobulin Test (DAT)	Direct Coombs	Auto Immune		EDTA Whole Blood	N/A	7 Days	N/A	N/A
Alkaline Phosphatase, Bone	BAP, BSAP	Bone Marker	CLIA	Serum	Not Stable	72 Hours	6 Months	1 Year
Cartilage Oligomeric Matrix Protein	COMP, Thrombospondin-5	Bone Marker	EIA	Serum	8 Days	2 Weeks	3 Months (Ongoing)	3 Months (Ongoing)
Osteopontin	OPN, T lymphocyte activation 1 (Eta-1)	Bone Marker	EIA	EDTA Plasma	8 Days	3 Days	12 Months	12 Months
Tartrate-resistant acid phosphatase isoform 5b	TRAP5b, TRAcP5b	Bone Marker	EIA	Serum	1 Day	1 Day	1 Month	12 Months
Telopeptide C Terminal, Type 1 Collagen (Urine)	CTX-1 Urine, Beta Crosslaps	Bone Marker	EIA	Urine	9 Days	7 Weeks	2 Months	5 Months
Angiotensin-Like 3	ANGPTL3	Cardiovascular	EIA	EDTA Plasma; Serum	Not Stable	1 Week	10 Months	10 Months
Angiotensin-like 4	ANGPTL-4	Cardiovascular	EIA	Serum	1 Week	2 Weeks	4 Months	4 Months
B type Natriuretic Peptide (BNP)	BNP	Cardiovascular	ECLIA	EDTA Plasma	1 Day	Not Acceptable	2 Months (Ongoing)	2 Months (Ongoing)
Creatine Kinase MB Isoenzyme	CK-MB	Cardiovascular	ECLIA	EDTA Plasma; Serum	4 Hours	5 Days	3 Months	3 Months
Endothelin 1	ET-1	Cardiovascular	EIA	Serum	Not Stable	1 Week	8 Months	8 Months
Endothelin 1 (Urine)		Cardiovascular	EIA	Urine	Not Stable	24 Hours	1 Month	9 Months
Homocysteine		Cardiovascular	Enzymatic	Serum	4 Days	2 Weeks	2 Years	2 Years
Lactate Dehydrogenase Isoenzyme	LDH Isoenzyme	Cardiovascular	Electrophoresis	Serum	9 Days	3 Days	N/A	N/A
Lipoprotein Lipase Mass		Cardiovascular	EIA	Lithium Heparin Plasma	1 Week	3 Weeks	1 Month	8 Months
Matrix Metalloproteinase-3	MMP-3	Cardiovascular	EIA	Heparin Plasma; Serum	Not Stable	Not Stable	TBD	TBD
Monocyte Chemotactic Protein-1 (Blood)	CCL2, MCP-1	Cardiovascular	EIA	EDTA Plasma; Serum	2 Weeks	2 Weeks	14 Months	14 Months
Monocyte Chemotactic Protein-1 (Urine)	CCL2, MCP-1	Cardiovascular	EIA	Urine	2 Weeks	2 Weeks	17 Months	17 Months
Myeloperoxidase (MPO)	MPO	Cardiovascular	EIA	EDTA Plasma	1 Week	2 Weeks	12 Months	12 Months
Myoglobin	MYO	Cardiovascular	ECLIA	Serum	1 Week	1 Month	11 Months	11 Months
Myoglobin (Urine)	MYO	Cardiovascular	ECLIA	Serum	Not Stable	1 Week	2 Weeks (Ongoing)	1 Month (Ongoing)
Paraoxonase PON1	PON1	Cardiovascular	Kinetic	Serum	1 Week	2 Weeks	2 Months	2 Months
Pro BNP	NT-Pro BNP	Cardiovascular	ECLIA	Serum	3 Days	6 Days	2 Years	N/A
Pro-ANP (Atrial Natriuretic peptide, Amino-Terminal)	NT-ProANP	Cardiovascular	EIA	Serum	3 Days	3 Days	13 Months	13 Months
Resistin		Cardiovascular	Immunoassay	Serum	1 Day	3 Days	8 Months	11 Months
Secreted phospholipase A2 mass	sPLA2 Mass	Cardiovascular	EIA	EDTA Plasma; Serum	2 Days	1 Week	7 Months	7 Months
Troponin I	TNI	Cardiovascular	ECLIA	EDTA Plasma; Serum	Not Stable	Not Stable	6 Months	6 Months
Troponin T, High Sensitivity	hs TNT	Cardiovascular	ECLIA	K2 EDTA Plasma; Serum	1 Week	2 Weeks	1 Year	1 Year
D Dimer Siemens		Coagulation	Turbidity	3.2% Na Citrate Plasma	1 Week	1 Week	3 Months	1 Year
D Dimer Stago		Coagulation	Immunoturbidity	3.2% Na Citrate Plasma	4 Hours	2 Days	6 Months	1 Year
Ecarin Clotting Time	ECT	Coagulation		3.2% Na Citrate Plasma				
Edoxaban Anti Xa		Coagulation	Chomogenic	3.2% Na Citrate Plasma	6 hours	N/A	N/A	24 months
Factor IIa, Anti	Anti FIIa	Coagulation		3.2% Na Citrate Plasma				
Factor IX	FIX	Coagulation	EIA	Citrate Plasma	N/A	2 Weeks	2 Weeks	1 Month (Ongoing)
Factor VII Activity		Coagulation		3.2% Na Citrate Plasma				
Factor VIII Activity (Siemens)	FVIII:C	Coagulation	Chomogenic	Citrate Plasma	Not Stable	Not Stable	3 Days	1 Month
Factor VIII Activity, Biophen	FVIII:C	Coagulation	Chomogenic	Citrate Plasma	Not Stable	Not Stable	1 month	12 months
Factor VIII Antigen	FVIII:Ag	Coagulation	EIA	Na Citrate Plasma	3 Days	2 Weeks	1 Month	1 Month (Ongoing)
Factor X (EIA)	FX	Coagulation	EIA	Citrate Plasma	N/A	2 Weeks	2 Weeks	1 Month (Ongoing)
Factor X (Siemens)		Coagulation	Colorimetry	3.2% Na Citrate Plasma	2 Weeks	2 Weeks	2 Weeks	1 Year
Factor Xa, Activity	Fxa	Coagulation	Clot Detection	3.2% Na Citrate Plasma	1 Day	1 Day	3 Months	12 Months
Factor Xa, Anti	LMWH, Low Molecular Weight Heparin	Coagulation	Clot Detection	3.2% Na Citrate Plasma	2 Hours	1 Day	8 Days	1 Year
Factor Xa, Anti (Low molecular weight heparin Anti Xa)	LMWH Anti-Xa	Coagulation	Colorimetry	Citrate Plasma	2 Hours	24 Hours	8 Days	12 Months
Fibrinogen		Coagulation	Nephelometry	EDTA Plasma	1 Week	1 Month	1 Year	N/A
Fibrinogen, Clauss		Coagulation	Clot Detection	Citrate Plasma	1 Week	3 Weeks	12 Months	12 Months
Heparin, Unfractionated	Anti Factor Xa Activity	Coagulation	Photometric	3.2% Na Citrate Plasma	2 Hours	1 Day	8 Days	1 Month
Partial Thromboplastin Time, Activated, Stago	APTT	Coagulation	Clot Detection	3.2% Na Citrate Plasma	1 Day	2 Days	6 Months	1 Year
Plasminogen Activator Inhibitor Type 1 Activity	PAI-1 Activity	Coagulation	EIA	Citrate Plasma	Not Stable	Not Stable	N/A	6 Months
Plasminogen Activator Inhibitor Type 1 Antigen	PAI-1	Coagulation	EIA	Citrate Plasma; EDTA Plasma	Not Stable	Not Stable	1 Year	2 Years
Plasminogen Activity	BPLG	Coagulation	Colorimetry	3.2% Na Citrate Plasma	1 Week	2 Weeks	11 Months	11 Months
Prekallikrein (PKK)	PK, PKK, Fletcher Factor	Coagulation	EIA	EDTA Plasma; Serum	1 Week	2 Days	8 Months	8 Months
Prothrombin Fragments 1&2		Coagulation	EIA	Na Citrate Plasma	4 Hours	8 Hours	1 Month	16 Months
Prothrombin Time, International Normalized Ratio, Stago	INR	Coagulation	Clot Detection	3.2% Na Citrate Plasma	1 Day	2 Days	6 Months	1 Year
Prothrombin Time, Stago	PT	Coagulation	Clot Detection	3.2% Na Citrate Plasma	2 Days	1 Week	1 Month	12 Months
Russell's Viper Venom		Coagulation	Clot Detection	3.2% Na Citrate Plasma	4 Hours	N/A	1 Month	N/A
Thrombin Activatable Fibrinolysis Inhibitor	TAFI Activity	Coagulation	Clot Detection	3.2% Na Citrate Plasma	4 Hours	6 Days	2 Months	12 Months
Thrombin Generation Assay		Coagulation	Fluorimunoassay	3.2% Na Citrate Plasma	Not Stable	Not Stable	2 Years	2 Years
Thrombin Generation Assay - PPP Low	TGA - PPP Low, Modified TGA	Coagulation	Fluorescence	3.2% Na Citrate Plasma	N/A	2 Days	12 Months	12 Months
Thrombin Generation Assay (Thermo)	TGA, CAT	Coagulation	Fluorescence	Citrate Plasma	N/A	2 Days	12 Months	12 Months

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Thrombin-Activatable Fibrinolysis Inhibitor Antigen	TAFI Ag	Coagulation	EIA	Citrate Plasma	1 Week	4 Weeks	12 Months	12 Months
Thromboxane, B2		Coagulation	EIA	Serum	1 Day	2 Weeks	6 Months	6 Months
Tissue -type Plasminogen Activator Antigen	TPA antigen, tPA	Coagulation	EIA	Citrate Plasma; EDTA Plasma	Not Stable	Not Stable	2 Weeks	6 Months
Von Willebrand Factor Antigen	vWF:Ag	Coagulation	Immunoturbidity	Citrate Plasma	1 Week	3 Weeks	12 Months	12 Months
Fructosamine (Daytona)		Diabetes	Enzymatic Cycling	EDTA Plasma; Serum	1 Day	3 Days	At least 7 Days (Ongoing stability study)	At least 7 Days (Ongoing stability study)
DNA A260/230		DNA	DNA Extraction	EDTA Whole Blood	2 Days	28 Days	1 Year	2 Years
DNA A260/280		DNA	DNA Extraction	EDTA Whole Blood	2 Days	28 Days	1 Year	2 Years
DNA Concentration - Automated		DNA	DNA Extraction	EDTA Whole Blood	48 Hours	28 Days	1 Year	2 Years
DNA Concentration - Manual		DNA	DNA Extraction	EDTA Whole Blood	2 Days	28 Days	1 Year	2 Years
DNA Purity - Automated		DNA	DNA Extraction	EDTA Whole Blood	N/A	28 Days	1 Year	2 Years
DNA Yield - Automated		DNA	DNA Extraction	EDTA Whole Blood	N/A	28 Days	1 Year	2 Years
DNA Yield - Manual		DNA	DNA Extraction	EDTA Whole Blood	2 Days	28 Days	1 Year	2 Years
Drug Screen, Amphetamine and Methamphetamine	AMP, m-AMP	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Barbituates	BAR	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Benzodiazepine	BZO	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Buprenorphine		Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Cocaine	COC	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Ecstasy	MDMA	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Ethyl Alcohol (Serum)	Ethanol	Drug	Enzymatic	Serum	1 Week	3 Weeks	5 Months	at least 6 Months
Drug Screen, Ethyl Alcohol (Urine)	urine alcohol	Drug	Enzymatic	Urine	2 Days	1 Week	1 Week	at least 6 Months
Drug Screen, Methadone	MTD	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Methaqualone		Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Opiates	OPI	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Oxycodone		Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Phencyclidine	PCP	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, Propoxyphene	PPX	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, TCA	TCA	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Drug Screen, THC	THC; THC-OH; Marijuana	Drug	Immunoassay	Urine	5 Days	2 Weeks	1 Year	1 Year
Aldosterone (Liaison)		Endocrinology	CLIA	EDTA Plasma; Serum	1 Day	2 Weeks	12 Months	12 Months
Aldosterone (Urine)		Endocrinology	CLIA	Urine	1 Week	2 Weeks	1 Month (Ongoing)	1 Month (Ongoing)
Angiotensinogen (Urine)	AGT	Endocrinology	EIA	Urine	Not stable	24 Hours	Not stable	3 Months (Ongoing)
Angiotensinogen, plasma	AGT plasma	Endocrinology	EIA	EDTA Plasma	1 Week	3.5 Weeks	3 Months (Ongoing)	3 Months (Ongoing)
Growth Hormone	GH	Endocrinology	Immunochemiluminiscence	Serum	1 Week	2 Weeks	3 Weeks (Ongoing)	3 Weeks (Ongoing)
Insulin Growth Factor - 1	IGF-1	Endocrinology	Immunochemiluminiscence	Serum	1 Week	2 Weeks	12 Months	12 Months
1,5 Anhydroglucitol	Glycomark	Endocrinology and Diabetes	Enzymatic	Serum	7 Days	7 Days	36 Months	1 Year
Adiponectin		Endocrinology and Diabetes	EIA	EDTA Plasma; Serum	4 Days	1 Week	18 Months	18 Months
Adrenocorticotrophic Hormone	ACTH	Endocrinology and Diabetes	ECLIA	EDTA Plasma	2 Hours	4 Hours	4 Weeks	2 Years
Albumin, Glycated		Endocrinology and Diabetes	Photometric	Serum	1 Week	2 Weeks	2 Months	9 Months
Beta 2 Hydroxybutyrate	RANBUT	Endocrinology and Diabetes	Kinetic	Serum	1 Week	1 Week	4 Months	4 Months
C Peptide		Endocrinology and Diabetes	ECLIA	EDTA Plasma; Serum	2 Days	10 Days	7 Months	7 Months
Calcitonin		Endocrinology and Diabetes	ECLIA	EDTA Plasma; Serum	4 Hours	1 Day	1 Year	1 Year
Chorionic Gonadotrophin	BHCG, Beta HCG, HCG, Pregnancy Test	Endocrinology and Diabetes	ECLIA	Citrate Plasma; EDTA Plasma; Fluoride Plasma; Heparin Plasma; Serum	3 Days	3 Days	1 Year	1 Year
Cortisol (Blood)		Endocrinology and Diabetes	ECLIA	EDTA Plasma; Serum	2 Weeks	2 Weeks	3 Months	2 Years
Cortisol (Urine)		Endocrinology and Diabetes	ECLIA	Urine	4 Days	2 Weeks	2 Weeks (Ongoing)	2 Weeks (Ongoing)
Cortisol, (Saliva)		Endocrinology and Diabetes	ECLIA	Saliva	2 Weeks	2 Weeks	1 Year	1 Year
Dehydroepiandrosterone Sulfate	DHEA-SO4	Endocrinology and Diabetes	ECLIA	Serum	2 Days	1 Week	2 Months	2 Months
Erythropoietin	EPO	Endocrinology and Diabetes	EIA	Serum	1 Week	2 Weeks	9 Months	9 Months
Estradiol	E2	Endocrinology and Diabetes	ECLIA	Serum	1 Week	1 Week	3 Months	2 Years
Folicle Stimulating Hormone	FSH	Endocrinology and Diabetes	ECLIA	Serum	2 Weeks	2 Weeks	3 Months	2 Years
Fructosamine		Endocrinology and Diabetes	Colorimetry	Serum	2 Weeks	2 Weeks	2 Months	N/A
Gastric Inhibitory Polypeptide	Glucose-dependent Insulinotropic Polypeptide, GIP	Endocrinology and Diabetes	EIA	EDTA P800 Tube	8 Days	8 Days	6 Months	6 Months
Ghrelin (Total)		Endocrinology and Diabetes	EIA	EDTA P800 Tube	1 Day	8 Days	9.5 Months	9.5 Months
Glucagon Like Peptide - 1, Active	GLP-1 Active	Endocrinology and Diabetes	EIA	EDTA P800 Tube	1 Week	1 Month	11 Months	11 Months
Glucagon Like Peptide - 1, Total	GLP-1 Total	Endocrinology and Diabetes	EIA	EDTA P800 Tube	1 Week	1 Month	11 Months	11 Months
Glucagon, R&D		Endocrinology and Diabetes	EIA	EDTA P800 Tube	3 Days	1 Week	8 Months	8 Months
Hemoglobin A1c	HBA1c	Endocrinology and Diabetes	HPLC	EDTA Whole Blood; Fluoride Whole Blood	1 Week	2 Months	10 Days	1 Year
Insulin		Endocrinology and Diabetes	ECLIA	EDTA Plasma; Lithium Heparin Plasma; Serum	1 Day	3 Weeks	6 Months	6 Months

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Leptin		Endocrinology and Diabetes	EIA	Citrate Plasma; EDTA Plasma; Heparin Plasma; Serum	1 Week	3 Weeks	14 Months	14 Months
Luteinizing Hormone	LH	Endocrinology and Diabetes	ECLIA	Serum	2 Weeks	2 Weeks	3 Months	2 Years
Oxyntomodulin	OXM	Endocrinology and Diabetes		EDTA Plasma				
Peptide YY	PYY	Endocrinology and Diabetes	EIA	EDTA P700 Tube; EDTA P800 Tube	1 Week	1 Month	1 Year	1 Year
Progesterone		Endocrinology and Diabetes	ECLIA	Serum	1 Day	5 Days	6 Months	6 Months
Proinsulin		Endocrinology and Diabetes	EIA	EDTA Plasma; Heparin Plasma; Serum	1 Week	2 Weeks	16 Months	16 Months
Prolactin		Endocrinology and Diabetes	ECLIA	Serum	1 Day	2 Weeks	6 Months	6 Months
Retinol Binding Protein (Blood)	RBP4	Endocrinology and Diabetes	EIA	Serum	1 Week	2 Weeks	1 Year	1 Year
Retinol Binding Protein 4 (Urine)	RBP4	Endocrinology and Diabetes	EIA	Urine	1 Day	2 Days	1 Month	1 Month
Sex Hormone Binding Globulin	SHBG	Endocrinology and Diabetes	ECLIA	Serum	1 Week	2 Weeks	2 Years	2 Years
Testosterone, Total		Endocrinology and Diabetes	ECLIA	Serum	2 Days	1 Week	6 Months	2 Years
Thyroid Peroxidase (TPO) Antibody	Anti-TPO	Endocrinology and Diabetes	ECLIA	Serum	Not Stable	17 Days	17 Days (Ongoing)	17 Days (Ongoing)
Thyroid Stimulating Hormone	TSH	Endocrinology and Diabetes	ECLIA	Serum	1 Week	1 Month	1 Year	1 Year
Thyroxine, Free	FT4	Endocrinology and Diabetes	ECLIA	Serum	1 Week	1 Week	1 Month	3 Months
Thyroxine, Total	T4	Endocrinology and Diabetes	ECLIA	Serum	1 Week	1 Week	6 Months	6 Months
Triiodothyronine, Free T3	Free T3	Endocrinology and Diabetes	ECLIA	Serum	1 Week	1 Week	1 Month	3 Months
Triiodothyronine, T3	T3	Endocrinology and Diabetes	ECLIA	Serum	1 Week	1 Week	1 Week	1 Week
Flow Cytometry, CD16/56	CD16/56	Flow Cytometry	Flow Cytometry	EDTA Whole Blood; Sodium Heparin Whole Blood; Streck Cytochex	Whole Blood: 1 Day, Streck Cytochex Blood Collection Tubes: 14 Days	Whole Blood: 2 Days Streck Cytochex Blood Collection Tubes: 14 Days	Not Stable	Not Stable
Flow Cytometry, CD19	CD19	Flow Cytometry	Flow Cytometry	EDTA Whole Blood; Sodium Heparin Whole Blood; Streck Cytochex	Whole Blood: 1 Day, Streck Cytochex Blood Collection Tubes: 14 Days	Whole Blood: 2 Days Streck Cytochex Blood Collection Tubes: 14 Days	Not Stable	Not Stable
Flow Cytometry, CD3	CD3	Flow Cytometry	Flow Cytometry	EDTA Whole Blood; Sodium Heparin Whole Blood; Streck Cytochex	Whole Blood: 1 Day, Streck Cytochex Blood Collection Tubes: 14 Days	Whole Blood: 2 Days Streck Cytochex Blood Collection Tubes: 14 Days	Not Stable	Not Stable
Flow Cytometry, CD4	CD4	Flow Cytometry	Flow Cytometry	EDTA Whole Blood; Sodium Heparin Whole Blood; Streck Cytochex	Whole Blood: 1 Day, Streck Cytochex Blood Collection Tubes: 14 Days	Whole Blood: 2 Days Streck Cytochex Blood Collection Tubes: 14 Days	Not Stable	Not Stable
Flow Cytometry, CD4/CD8 Ratio	CD4/CD8/TBNC	Flow Cytometry	Flow Cytometry	EDTA Whole Blood; Sodium Heparin Whole Blood; Streck Cytochex	Whole Blood: 1 Day, Streck Cytochex Blood Collection Tubes: 14 Days	Whole Blood: 2 Days Streck Cytochex Blood Collection Tubes: 14 Days	Not Stable	Not Stable
Flow Cytometry, CD45	CD45	Flow Cytometry	Flow Cytometry	EDTA Whole Blood; Sodium Heparin Whole Blood; Streck Cytochex	Whole Blood: 1 Day, Streck Cytochex Blood Collection Tubes: 14 Days	Whole Blood: 2 Days Streck Cytochex Blood Collection Tubes: 14 Days	Not Stable	Not Stable
Flow Cytometry, CD8	CD8	Flow Cytometry	Flow Cytometry	EDTA Whole Blood; Sodium Heparin Whole Blood; Streck Cytochex	Whole Blood: 1 Day, Streck Cytochex Blood Collection Tubes: 14 Days	Whole Blood: 2 Days Streck Cytochex Blood Collection Tubes: 14 Days	Not Stable	Not Stable
Calprotectin, Fecal		Gastrointestinal	CLIA	Feces	N/A	3 Days	4 Months	N/A
Collagen Type IV	Collagen IV	Gastrointestinal	EIA	EDTA Plasma; Serum	8 Days	8 Days	at least 2 months	at least 2 months
Blood Smear Evaluation	Peripheral Blood Smear	Hematology	Manual	Blood Smear	N/A	N/A	Do not freeze	Do not freeze
CBC	Complete Blood Count	Hematology		EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, Hematocrit	HCT	Hematology	Instrument Calculated	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, Hemoglobin	HB, HGB	Hematology	Photometric	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, Mean Corpuscular Hgb	MCH	Hematology	Instrument Calculated	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, Mean Corpuscular Hgb Concentration	MCHC	Hematology	Instrument Calculated	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, Mean Corpuscular Volume	MCV	Hematology	Electronic Impedance	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, Mean Platelet Volume	MPV	Hematology	Electronic Impedance	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, Platelet Count	PLT	Hematology	Electronic Impedance	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, RBC Count	RBC	Hematology	Electronic Impedance	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, Red Cell Distribution Width	RDW	Hematology	Electronic Impedance	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
CBC, WBC Count	WBC	Hematology	Electronic Impedance	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
Reticulocyte Count	Retic	Hematology	VCS	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
Reticulocyte Count, Absolute	Retics Abs	Hematology	Calculation	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
Sickle Cells Screening	SCS, Hemoglobin S	Hematology	Turbidity	EDTA Whole Blood	15 Days	45 Days	Not Stable	Not Stable
WBC Differential, Basophils		Hematology	VCS	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
WBC Differential, Eosinophils		Hematology	VCS	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
WBC Differential, Leucocytes		Hematology	VCS	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze

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WBC Differential, Monocytes		Hematology	VCS	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
WBC Differential, Neutrophils, Bands	Bands	Hematology	Manual	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
WBC Differential, Neutrophils, Segmented	Segs	Hematology	VCS	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
WBC Differential, Neutrophils, Total		Hematology	VCS	EDTA Whole Blood	3 Days	3 Days	Do not freeze	Do not freeze
BK Virus DNA	BKV	Infectious Disease	PCR	EDTA Plasma	Not Stable	Not Stable	Not Stable	TBD
Cytomegalovirus DNA	CMV DNA	Infectious Disease	PCR	EDTA Plasma	Not Acceptable	Not Acceptable	Not Acceptable	5 Months (Ongoing)
Cytomegalovirus, IgG	CMV IgG	Infectious Disease	ECLIA	Serum	1 Week	1 Month	6 Months	N/A
Cytomegalovirus, IgM	CMV IgM	Infectious Disease	ECLIA	Serum	1 Week	1 Month	3 Months	N/A
Epstein-Barr Virus DNA	EBV	Infectious Disease	PCR	EDTA Plasma	Not Stable	Not Stable	Not Stable	TBD
Hepatitis A Virus Antibody, IgM	Anti HAV IgM	Infectious Disease	ECLIA	Serum	2 Hours	1 Week	3 Months	3 Months
Hepatitis A Virus Antibody, Total	Anti HAV	Infectious Disease	ECLIA	Serum	N/A	1 Week	3 Months	N/A
Hepatitis B core Antibody, IgM	Anti HBc IgM	Infectious Disease	ECLIA	Serum	N/A	6 Days	3 Months	N/A
Hepatitis B core Antibody, Total	Anti HBc Total	Infectious Disease	ECLIA	Serum	N/A	5 Days	3 Months	N/A
Hepatitis B DNA	HBV DNA	Infectious Disease	RT-PCR	EDTA Plasma; Serum	1 Day	3 Days	1 Year	1 Year
Hepatitis B Envelope Antibody	Anti HBe	Infectious Disease	ECLIA	Serum	N/A	5 Days	3 Months	N/A
Hepatitis B Envelope Antigen (Qualitative)	HBeAg	Infectious Disease	ECLIA	Serum	N/A	7 Days	3 Months	3 Months
Hepatitis B Envelope Antigen (Quantitative)	HBeAg	Infectious Disease	ECLIA	Serum	N/A	7 Days	3 Months	3 Months
Hepatitis B Genotyping		Infectious Disease	EIA	Serum				
Hepatitis B Surface Antibody	HBs Ab	Infectious Disease	ECLIA	Serum	3 Days	6 Days	3 Months	N/A
Hepatitis B Surface Antigen (Qualitative)	HBs Ag	Infectious Disease	ECLIA	Serum	1 Week	1 Week	1 Year	1 Year
Hepatitis B Surface Antigen (Quantitative)	HBs Ag Quant	Infectious Disease	ECLIA	Serum	7 Days	2 Weeks	6 Months (Ongoing)	6 Months (Ongoing)
Hepatitis B Surface Antigen Confirmatory (Qualitative)	HBs Ag Confirmatory	Infectious Disease	ECLIA	Serum	1 Week	1 Week	3 Months	3 Months
Hepatitis C Virus Antibody	Anti HCV	Infectious Disease	ECLIA	Serum	3 Days	3 Weeks	3 Months	3 Months
Hepatitis C Virus RNA Qualitative	HCV RNA Qual	Infectious Disease	RT-PCR	EDTA Plasma; Serum	1 Day	3 Days	2 Months	2 Months
Hepatitis C Virus RNA Quantitative	HCV RNA Quant	Infectious Disease	RT-PCR	EDTA Plasma; Serum	1 Day	3 Days	60 Days	60 Days
Hepatitis D Virus Antibody	Anti HDV	Infectious Disease	EIA	Serum	<24 Hours	<24 Hours	3 Weeks	2 Months
Hepcidin-25		Infectious Disease	EIA	Serum	2 Days	1 Week	3 Months	8 Months
Human Immunodeficiency Virus 1 & 2 p24	HIV p24	Infectious Disease	ECLIA	Serum	7 Days	4 Weeks	3 Months	3 Months
Procalcitonin (PCT)	PCT	Infectious Disease	Immunochemiluminescence	EDTA Plasma; Serum	24 Hours	24 Hours	6 Months	2 Years
Quantiferon TB Gold Interferon Gamma	QFT	Infectious Disease	EIA	Heparin Plasma	3 Days	28 Days	4 Months	4 Months
Syphilis	RPR	Infectious Disease	APR Test Card	Serum	4 Hours	5 Days	2 Weeks	2 Weeks
Varicella-Zoster Virus IgG	Anti-VZV IgG	Inflammation and Immunology	CLIA	Serum	4 Days	4 Days	2 Weeks (Ongoing)	2 Weeks (Ongoing)
Alpha 2 Macroglobulin	A2 Macro	Inflammation and Immunology	Nephelometry	Serum	1 Week	2 Weeks	1 Month	1 Month
Alpha-1 Antitrypsin	A1AT	Inflammation and Immunology	Turbidity	Serum	7 Days	7 Days	3 Days	7 Days
Amyloid A	SAA	Inflammation and Immunology	Nephelometry	Serum	Not Stable	8 Days	3 Months	3 Months
Anti-Nuclear Antibodies (ANA) Screen	ANA	Inflammation and Immunology	Immunoassay	EDTA Plasma; Serum	48 Hours	1 Week	12 Months	12 Months
AXL, soluble	sAXL, soluble cell surface receptor tyrosine kinase AXL	Inflammation and Immunology	EIA	EDTA Plasma; Serum	8 Days	2 Weeks	3 Months (Ongoing)	3 Months (Ongoing)
C Reactive Protein, High Sensitivity	hsCRP	Inflammation and Immunology	Nephelometry	EDTA Plasma; Heparin Plasma; Serum	1 Week	1 Month	27 Months	27 Months
C Reactive Protein, Ultra Sensitivity		Inflammation and Immunology	Nephelometry	Serum	1 Week	1 Month	27 Months	27 Months
Calprotectin		Inflammation and Immunology	EIA	EDTA Plasma	Not Stable	Not Stable	TBD	TBD
Cardiolipin Antibody, IgA	Cardiolipin IgA	Inflammation and Immunology	Immunoassay	EDTA Plasma; Serum	8 Hours	48 Hours	1 Year	1 Year
Cardiolipin Antibody, IgG	Cardiolipin IgG	Inflammation and Immunology	Immunoassay	EDTA Plasma; Serum	8 Hours	48 Hours	1 Year	1 Year
Cardiolipin Antibody, IgM	Cardiolipin IgM	Inflammation and Immunology	Immunoassay	EDTA Plasma; Serum	8 Hours	48 Hours	1 Year	1 Year
CD40 Ligand	sCD40	Inflammation and Immunology	EIA	EDTA Plasma; Heparin Plasma; Serum	Not Stable	Not Stable	N/A	18 Months
Complement Bb	Bb Fragment	Inflammation and Immunology	EIA	EDTA Plasma; Serum	3 Days	3 Days	10 Months	15 Months
Complement C3	C3	Inflammation and Immunology	Nephelometry	EDTA Plasma; Serum	Not Stable	1 Week	1 Week	1 Week
Complement C4	C4	Inflammation and Immunology	Nephelometry	EDTA Plasma; Serum	3 Days	4 Days	3 Months	3 Weeks
Complement C4a	C4a	Inflammation and Immunology	EIA	EDTA Plasma	Not Stable	Not Stable	Not Stable	1 Month
Complement C5a	C5a	Inflammation and Immunology	EIA	EDTA Plasma	2 Weeks	2 Weeks	10 Months	15 Months
Double-Stranded DNA (dsDNA) Antibody, IgG	dsDNA, dsDNA IgG	Inflammation and Immunology	Immunoassay	EDTA Plasma; Serum	48 Hours	1 Week	12 Months	12 Months
Enhanced Liver Fibrosis	ELF	Inflammation and Immunology	Immunochemiluminescence	Serum	4 Days	1 Month	2 Months (Ongoing)	2 Months (Ongoing)
E-Selectin, Soluble	sE-Selectin	Inflammation and Immunology	EIA	EDTA Plasma	Unknown	Unknown	Unknown	Unknown
Fibroblast Activation Protein	FAP	Inflammation and Immunology	EIA	EDTA Plasma	1 Week	1 Week	12 Months	12 Months
Granulocyte-Macrophage Colony Stimulating Factor Meso Scale Cytokine V-Plex	GM-CSF	Inflammation and Immunology	ECLIA	EDTA Plasma;#Serum	7 Days	2 Weeks	13 Months	11 Months
Granzyme B		Inflammation and Immunology	EIA	Serum	Not Acceptable	Not Acceptable	1 Month (Ongoing)	1 Month (Ongoing)
Haptoglobin		Inflammation and Immunology	Nephelometry	Serum	1 Week	3 Weeks	1 Month	1 Month
Heparin Binding Epidermal Growth Factor, Ascites	HB-EGF	Inflammation and Immunology	EIA	Cell Culture; EDTA Plasma; Serum; Urine	1 Week	1 Week	18 Months	18 Months
Heparin Binding Epidermal Growth Factor, Bound	HB-EGF	Inflammation and Immunology	EIA	Cell Culture; EDTA Plasma; Serum; Urine	1 Week	1 Week	18 Months	18 Months

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Analyte	Aliases	Category / Therapeutic Area	Method	Sample Type(s)	Stability (Ambient)	Stability (2-8 C)	Stability (-20 C)	Stability (-70 C)
Heparin Binding Epidermal Growth Factor, Total	HB-EGF	Inflammation and Immunology	EIA	Cell Culture; EDTA Plasma; Serum; Urine	1 Week	1 Week	18 Months	18 Months
Hepatocyte Growth Factor	HGF	Inflammation and Immunology	EIA	Serum	1 Week	1 Week	15 Months	15 Months
Human Chitinase 3-like 1	CHI3L1, YKL-40	Inflammation and Immunology	EIA	Serum	7 Days	2 Weeks	4 Months (Ongoing)	4 Months (Ongoing)
Hyaluronic Acid	HA	Inflammation and Immunology	Immunochemiluminiscence	Serum	4 Days	1 Month	2 Months (Ongoing)	2 Months (Ongoing)
Immunoglobulin A	IgA	Inflammation and Immunology	Nephelometry	Serum	1 Week	2 Weeks	11 Months	11 Months
Immunoglobulin D	IgD	Inflammation and Immunology	Nephelometry	Serum	1 Week	1 Week	1 Month	1 Month
Immunoglobulin E	IgE	Inflammation and Immunology	Nephelometry	Serum	1 Week	2 Weeks	11 Months	11 Months
Immunoglobulin G	IgG	Inflammation and Immunology	Nephelometry	Serum	1 Week	1 Week	8 Months	8 Months
Immunoglobulin G (Urine)	IgG, urine	Inflammation and Immunology	Nephelometry	Urine	3 Days	2 Weeks	3 Days	1 Week
Immunoglobulin M	IgM	Inflammation and Immunology	Nephelometry	Serum	1 Week	2 Weeks	11 Months	11 Months
Intercellular Adhesion Molecule 1	ICAM-1, sICAM-1	Inflammation and Immunology	EIA	EDTA Plasma	Unknown	Unknown	Unknown	Unknown
Interferon gamma Mesoscale Proinflammatory V-Plex	IFNgamma, IFN $\gamma$	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma; Serum	3 Days	2 Weeks	10 Months	10 Months
Interferon gamma-induced Protein 10 Meso Scale Chemokine V-Plex	IP-10	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	Serum: Not Stable, EDTA-Plasma: 3 Days	Serum: Not Stable, EDTA-Plasma: 4 Days	Serum: 13 Months, EDTA-Plasma: 13 Months	Serum: 13 Months, EDTA-Plasma: 13 Months
Interleukin- 23	IL-23, TH-17 panel	Inflammation and Immunology	EIA	EDTA Plasma; Serum	Not Stable	Not Stable	10 Months	10 Months
Interleukin-1 Receptor Antagonist	IL-1ra	Inflammation and Immunology	EIA	Serum	3 Days	2 Weeks	12 Months	12 Months
Interleukin-10 Meso Scale Multiplex	IL-10	Inflammation and Immunology	Multiplex Immunoassay	Serum	1 Week	3 Weeks	1 Year	1 Year
Interleukin-10 Meso Scale Proinflammatory V-Plex	IL-10	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma; Serum	3 Days	3 Days	10 Months	10 Months
Interleukin-12/Interleukin-23 p40 Meso Scale Cytokine V-Plex	IL-12/IL-23p40	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	Serum: 3 Days, EDTA-Plasma: 8 Days	Serum: 2 Weeks, EDTA-Plasma: 2 Weeks	Serum: 3 Weeks, EDTA-Plasma: 3 Weeks (ongoing)	Serum: 3 Weeks, EDTA-Plasma: 3 Weeks (ongoing)
Interleukin-12p70 Meso Scale Proinflammatory V-Plex	IL-12p70	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma; Serum	Serum: 3 Days; EDTA-Plasma: 1 Week	Serum: 3 Days; EDTA-Plasma: 2 Weeks	10 Months	10 Months
Interleukin-13 Meso Scale Proinflammatory V-Plex	IL-13	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma; Serum	Serum: 1 Day; EDTA-Plasma: 3 Days	Serum: 1 Day; EDTA-Plasma: 3 Days	10 Months	10 Months
Interleukin-15 Meso Scale Cytokine V-Plex	IL-15	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	Not Stable	Not Stable	10 Months	10 Months
Interleukin-17a Meso Scale Cytokine V-Plex	IL-17a	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	Serum: 1 Day, EDTA-Plasma: Not Stable	Serum: 1 Day, EDTA-Plasma: 2 Days	Serum: 11 Months, EDTA-Plasma: 11 Months	Serum: 11 Months, EDTA-Plasma: 11 Months
Interleukin-1 $\alpha$ Meso Scale Cytokine V-Plex	IL-1 $\alpha$	Inflammation and Immunology	EIA	EDTA Plasma; Serum	Serum: Not Stable, EDTA-Plasma: 7 Days	Serum: 3 Days, EDTA-Plasma: Not Stable	Serum: 13 Months, EDTA-Plasma: 10 Months	Serum: 13 Months, EDTA-Plasma: 10 Months
Interleukin-1 $\beta$	IL-1 $\beta$	Inflammation and Immunology	EIA	Serum	3 Days	3 Days	1 Year	1 Year
Interleukin-1 $\beta$ Meso Scale Multiplex	IL-1 $\beta$	Inflammation and Immunology	Multiplex Immunoassay	Serum	3 Days	3 Days	1 Year	1 Year
Interleukin-1 $\beta$ Meso Scale Proinflammatory V-Plex	IL-1 $\beta$ , IL-1beta	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma; Serum	Serum: Not Stable; EDTA-Plasma: 1 Day	Serum: Not Stable; EDTA-Plasma: 1 Day	Serum: 10 Months; EDTA-Plasma: 10 Months	Serum: 10 Months; EDTA-Plasma: 10 Months
Interleukin-2 Meso Scale Proinflammatory V-Plex	IL-2	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma; Serum	Serum: 7 Days; EDTA-Plasma: Not Stable	Serum: 2 Weeks; EDTA-Plasma: 2 Weeks	Serum: 8 Months; EDTA-Plasma: 8 Months	Serum: 10 Months; EDTA-Plasma: 10 Months
Interleukin-2 Receptor alpha (validating)	IL-2Ra	Inflammation and Immunology	EIA	Serum	7 Days	2 Weeks	2 Months (Ongoing)	2 Months (Ongoing)
Interleukin-22	IL-22	Inflammation and Immunology	EIA	EDTA Plasma; Heparin Plasma; Serum	Not Stable	Not Stable	N/A	N/A
Interleukin-4 Meso Scale Proinflammatory V-Plex	IL-4	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma;#Serum	Serum: 1 Day; EDTA-Plasma: 3 Days	Serum: 2 Weeks; EDTA-Plasma: 3 Days	Serum: 10 Months; EDTA-Plasma: 9 Months	Serum: 6 Months; EDTA-Plasma: 10 Months
Interleukin-5 Meso Scale Cytokine V-Plex	IL-5	Inflammation and Immunology	ECLIA	EDTA Plasma;#Serum	Not Stable	Note Stable	10 Months	10 Months
Interleukin-6	IL-6	Inflammation and Immunology	EIA	Serum	1 Week	1 Week	1 Year	1 Year
Interleukin-6 High Sensitivity	hsIL-6	Inflammation and Immunology	EIA	Serum	1 Week	2 Weeks	1 Year	1 Year
Interleukin-6 Meso Scale Multiplex	IL-6	Inflammation and Immunology	Multiplex Immunoassay	Serum	1 Week	2 Weeks	1 Year	1 Year
Interleukin-6 Meso Scale Proinflammatory V-Plex	IL-6	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma; Serum	1 Week	2 Weeks	10 Months	10 Months
Interleukin-7 Meso Scale Cytokine V-Plex	IL-7	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	Serum: 3 Days; EDTA-Plasma: 8 Days	Serum: 2 Weeks; EDTA-Plasma: Not Stable	Serum: 1 Month; EDTA-Plasma: 1 Month (Ongoing)	Serum: 1 Month; EDTA-Plasma: 1 Month (Ongoing)
Interleukin-8 Meso Scale Proinflammatory V-Plex	IL-8	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma; Serum	1 Week	2 Weeks	10 Months	10 Months
Lupus Anticoagulant		Inflammation and Immunology	Clot Detection	3.2% Na Citrate Plasma	4 Hours	N/A	2 Weeks	6 Months
Macrophage Derived Chemokine Meso Scale Chemokine V-Plex	MDC	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	Serum: 4 Days, EDTA-Plasma: 1 Day	Serum: 2 Weeks, EDTA-Plasma: 2 Weeks	Serum: 11 Months, EDTA-Plasma: 13 Months	Serum: 11 Months, EDTA-Plasma: 13 Months
Macrophage Inflammatory Protein 1, alpha	MIP, alpha	Inflammation and Immunology	EIA	Serum	1 Week	2 Weeks	1 Year	1 Year

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Macrophage Inflammatory Protein 1, beta Meso Scale Chemokine V-Plex	MIP-1b	Inflammation and Immunology						
Macrophage Inflammatory Protein 1-alpha Meso Scale Chemokine V-Plex	MIP-1alpha	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	7 Days	2 Weeks	13 Months	13 Months
Macrophage Inflammatory Protein 3 alpha Meso Scale TH-17 V-Plex	MIP-3a, MIP3alpha, TH-17 Panel	Inflammation and Immunology	EIA	EDTA Plasma; Serum	6 Days	3 Weeks	1 Month (Ongoing)	1 Month (Ongoing)
Macrophage Inhibitory Cytokine 1	MIC-1, GDF-15	Inflammation and Immunology	EIA	Serum	1 Week	3 Weeks	11 Months	11 Months
Matrix Metalloproteinase-9	MMP-9	Inflammation and Immunology	EIA	Heparin Plasma; Serum	1 Week	2 Weeks	1 Month (Ongoing)	1 Month (Ongoing)
Monocyte Chemoattractant Protein-1 Meso Scale Chemokine V-Plex	MCP-1	Inflammation and Immunology		EDTA Plasma; Serum	7 Days	2 Weeks	13 Months	13 Months
Monocyte Chemoattractant Protein-4 Meso Scale Chemokine V-Plex	MCP-4	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	7 Days	2 Weeks	13 Months	13 Months
Prealbumin	Transthyretin	Inflammation and Immunology	Nephelometry	Serum	4 Days	3 Weeks	1 Year	1 Year
Procollagen III Peptide	PIIINP, P3NP	Inflammation and Immunology	Immunochemiluminiscence	Serum	4 Days	1 Month	2 Months (Ongoing)	2 Months (Ongoing)
Proteinase 3	PR3	Inflammation and Immunology	EIA	EDTA Plasma	Unknown	Unknown	Unknown	Unknown
P-Selectin, Soluble	P-Selectin	Inflammation and Immunology	EIA	Citrate Plasma; EDTA Plasma	1 Week	2 Weeks	17 Months	17 Months
Smith Antibody, IgG	Anti-Smdp, Anti-SMD	Inflammation and Immunology	Fluorescence enzyme immunoassay	Serum	8 Hours	48 Hours	2 Years	Not Acceptable
Thymus and Activation-Regulated Chemokine Meso Scale Chemokine V-Plex	TARC	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	Serum: 7 Days, EDTA-Plasma: 7 Days	Serum: 2 Weeks, EDTA-Plasma: 1 Week	Serum: 13 Months, EDTA-Plasma: 4 Months	Serum: 13 Months, EDTA-Plasma: 13 Months
Thyroxine-Binding Globulin	TBG	Inflammation and Immunology	ECLIA	Serum	7 Days	14 Days	3 Weeks (Ongoing)	3 Weeks (Ongoing)
Tissue Inhibitor of Metalloproteinase 1	TIMP1	Inflammation and Immunology	Immunochemiluminiscence	Serum	4 Days	1 Month	2 Months (Ongoing)	2 Months (Ongoing)
Tryptase		Inflammation and Immunology	Fluorimmunoassay	EDTA Plasma; Serum	1 Week	2 Weeks	8 Months (Ongoing)	8 Months (Ongoing)
Tumor Necrosis Factor I	TNFI	Inflammation and Immunology	EIA	Serum	1 Week	1 Month	8 Months (Ongoing)	8 Months (Ongoing)
Tumor Necrosis Factor β Meso Scale Cytokine V-Plex	TNF-β	Inflammation and Immunology	ECLIA	EDTA Plasma; Serum	Serum: 7 Days, EDTA-Plasma: 7 Days	Serum: 7 Days, EDTA-Plasma: 2 Weeks	Serum: 11 Months, EDTA-Plasma: 13 Months	Serum: 13 Months, EDTA-Plasma: 13 Months
Tumor Necrosis Factor-alpha	TNF-alpha	Inflammation and Immunology	EIA	Serum	Not Stable	Not Stable	14 Months	14 Months
Tumor Necrosis Factor-alpha Meso Scale Multiplex	TNFa	Inflammation and Immunology	Multiplex Immunoassay	Serum	2 Days	3 Days	Not Stable	1 Year
Tumor Necrosis Factor-alpha Meso Scale Proinflammatory V-Plex	TNFalpha, TNFα	Inflammation and Immunology	Multiplex Immunoassay	EDTA Plasma; Serum	1 Day	1 Day	10 Months	10 Months
Apolipoprotein AI	Apo AI	Lipid and Lipoprotein Metabolism	Nephelometry	EDTA Plasma; Serum	3 Weeks	3 Months	1 Year	2 Years
Apolipoprotein AII	Apo AII	Lipid and Lipoprotein Metabolism	Nephelometry	EDTA Plasma; Serum	3 Days	1 Week	9 Months (Ongoing)	9 Months (Ongoing)
Apolipoprotein AV	Apo AV, Apo A5	Lipid and Lipoprotein Metabolism	EIA	Serum	2 Days	6 Days	4 Months	12 Months
Apolipoprotein B, Total	Apo B	Lipid and Lipoprotein Metabolism	Nephelometry	EDTA Plasma; Serum	3 Weeks	3 Months	1 Year	2 Years
Apolipoprotein B-48	Apo B-48	Lipid and Lipoprotein Metabolism	EIA	EDTA Plasma; Serum	1 Week	3 Weeks	3 Months	1 Year
Apolipoprotein CII	Apo CII	Lipid and Lipoprotein Metabolism	Immunoturbidity	Serum	72 Hours	1 Week	12 Weeks	12 Weeks
Apolipoprotein CIII	Apo CIII	Lipid and Lipoprotein Metabolism	Immunoturbidity	Serum	Not Stable	1 Month	1 Year	1 Year
Apolipoprotein E	Apo E	Lipid and Lipoprotein Metabolism	Nephelometry	EDTA Plasma; Serum	3 Days	1 Week	1 Year	1 Year
Cholesterol Ester Transfer Protein Activity	CETP Activity	Lipid and Lipoprotein Metabolism	Fluorimmunoassay	EDTA Plasma	Not Stable	Not Stable	6 Weeks	6 Weeks
Cholesterol Ester Transfer Protein Activity, EVAK	CETP Activity	Lipid and Lipoprotein Metabolism	Fluorimmunoassay	EDTA Plasma	Not Stable	Not Stable	11 Months	11 Months
Cholesterol Ester Transfer Protein Mass	CETP Mass	Lipid and Lipoprotein Metabolism	EIA	EDTA Plasma	1 Week	2 Weeks	9 Months	9 Months
Cholesterol, Free	Unesterified Cholesterol	Lipid and Lipoprotein Metabolism	Photometric	EDTA Plasma; Serum	2 days	2 Weeks	at least 14 Months	at least 14 Months
Cholesterol, High Density Lipoprotein (Precipitation)	HDL-C	Lipid and Lipoprotein Metabolism	Precipitation	Serum	3 Days	1 Month	1 Year	1 Year
Cholesterol, High Density Lipoprotein Subfractions (Precipitation)	HDL subfractions, HDL2, HDL3	Lipid and Lipoprotein Metabolism	Precipitation	Serum	N/A	2 Days	N/A	N/A
Cholesterol, High Density Lipoprotein Subfractions (Ultracentrifugation)	HDL subfractions, HDL2, HDL3	Lipid and Lipoprotein Metabolism	Ultracentrifugation	EDTA Plasma; Serum	3 Weeks	2 Months	2 Months	1 Year
Cholesterol, Intermediate Density Lipoprotein (Ultracentrifugation)	IDL	Lipid and Lipoprotein Metabolism	Ultracentrifugation	EDTA Plasma; Serum	3 Days	1 Month	1 Year	1 Year
Cholesterol, Low Density Lipoprotein (Friedewald Calculation)	LDL-C	Lipid and Lipoprotein Metabolism	Calculation	Calculation	N/A	N/A	N/A	N/A
Cholesterol, Low Density Lipoprotein (Direct)	LDL-C	Lipid and Lipoprotein Metabolism	Enzymatic	Serum	4 Days	2 Weeks	Not Stable	Not Stable
Cholesterol, Low Density Lipoprotein (Ultracentrifugation)	LDL-C, Beta Quant, BQ LDL	Lipid and Lipoprotein Metabolism	Ultracentrifugation	EDTA Plasma; Serum	3 Days	1 Month	1 Year	1 Year
Cholesterol, Total		Lipid and Lipoprotein Metabolism	Photometric	Serum	3 Days	1 Month	1 Year	1 Year
Cholesterol, Very Low Density Lipoprotein (Ultracentrifugation)	VLDL-C, Beta Quant, BQ VLDL	Lipid and Lipoprotein Metabolism	Ultracentrifugation	EDTA Plasma; Serum	3 Days	1 Month	1 Year	1 Year
Chylomicron (Ultracentrifugation)	Chylos, CM ( CM_Chol, CM_Trig, CM_PhosLip)	Lipid and Lipoprotein Metabolism	Ultracentrifugation	EDTA Plasma; Serum	Not Stable	4 Days	Do not freeze	Do not freeze
Fatty Acids, Free	NEFA, FFA	Lipid and Lipoprotein Metabolism	Colorimetry	Serum	Not Stable	1 Week	12 Months	12 Months
Glycerol, Free		Lipid and Lipoprotein Metabolism	Photometric	Serum	Not Stable	1 Day	1 Month	9 Months
Lipoprotein (a), Beckman Coulter	Lp(a) (molar)	Lipid and Lipoprotein Metabolism	Immunoturbidity	Serum	2 Weeks	2 Months	1 Year	1 Year

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Lipoprotein (a), Siemens BNII	Lp(a) (mass)	Lipid and Lipoprotein Metabolism	Nephelometry	EDTA Plasma; Heparin Plasma; Serum	2 Weeks	2 Months	2 Years	2 Years
Lipoprotein-associated Phospholipase A2 Activity	Lp-PLA2 Activity	Lipid and Lipoprotein Metabolism	Photometric	EDTA Plasma; Serum	8 Hours	2 Weeks	18 Months	2.5 Years
Lipoprotein-associated phospholipase A2, Mass	Lp-PLA2 Mass	Lipid and Lipoprotein Metabolism	EIA	EDTA Plasma; Serum	<24 Hours	1 Week	N/A	12 Months (Ongoing)
Oxidized LDL	OxLDL	Lipid and Lipoprotein Metabolism	EIA	EDTA Plasma; Serum	1 Week (at least)	2 Weeks (at least)	11 Months	11 Months
PCSK9 (CircluLex)		Lipid and Lipoprotein Metabolism	EIA	EDTA Plasma; Serum	1 Week	1 Month	Not Stable	19 Months
PCSK9 (R&D Systems)		Lipid and Lipoprotein Metabolism	EIA	EDTA Plasma; Serum	1 Week Serum; 3 Days EDTA Plasma	1 Month Serum, EDTA Plasma	Not Stable Serum; 2 Month EDTA Plasma	28 Months Serum; 1 Year EDTA Plasma
Phospholipids		Lipid and Lipoprotein Metabolism	Enzymatic	Serum	2 Weeks	1 Month	10 Months (Ongoing)	10 Months (Ongoing)
Pre-beta1-HDL	Pre-β1-HDL	Lipid and Lipoprotein Metabolism	EIA	EDTA Plasma	Not Stable	1 Week	5 Months	8 Months (Ongoing)
Retinyl Palmitate		Lipid and Lipoprotein Metabolism	UPLC	EDTA Plasma;#Serum	5 Days	1 Month	4 Months	1 Year
Triglyceride	Trig	Lipid and Lipoprotein Metabolism	Colorimetry	Serum	3 Days	3 Weeks	2 Years	2 Years
Alanine Aminotransferase	ALT, SGPT	Metabolic	Kinetic	Serum	3 Days	1 Week	3 Days	1 Year
Albumin (Blood)		Metabolic	Endpoint Photometric	Serum	7 Days	1 Month	6 Months	6 Months
Alkaline Phosphatase	ALP	Metabolic	Kinetic	Serum	1 Week	1 Week	3 Months	1 Year
Amylase (Blood)	Alpha Amylase	Metabolic	Enzymatic	Serum	1 Week	1 Month	1 Year	1 Year
Anion Gap		Metabolic	Calculation	Calculation	N/A	N/A	N/A	N/A
Aspartate Amino Transferase	AST, SGOT	Metabolic	Kinetic	Serum	3 Days	2 Weeks	3 Months	1 Year
Bicarbonate, Total	CO2	Metabolic	Photometric	Serum	3 Days	1 Week	1 Year	1 Year
Bile Acids, Total		Metabolic	Enzymatic Cycling	Serum	1 Week	2 Weeks	1 Year	1 Year
Bilirubin, Direct	Conjugated Bilirubin	Metabolic	Photometric	Serum	2 Days	1 Week	1 Month	6 Months
Bilirubin, Indirect	Unconjugated Bilirubin	Metabolic	Calculation	Calculation	N/A	N/A	N/A	N/A
Bilirubin, Total		Metabolic	Photometric	Serum	2 Days	1 Week	1 Month	6 Months
Calcium (Blood)		Metabolic	Photometric	Serum	1 Week	2 Weeks	2 Years	1 Year
Calcium (Urine)		Metabolic	Photometric	Urine	1 Week	1 Week	1 Year	1 Year
Carbohydrate Deficient Transferrin, Percent	% CDT	Metabolic	Immunonephelometry	Serum	1 Day	2 Weeks	2 Weeks (Ongoing)	2 Weeks (Ongoing)
Caspase 3/7		Metabolic	Luminescence	Serum	Not Stable	2 Weeks	1 Year	1 Year
Caspase 8		Metabolic	Luminescence	Serum	Not Stable	1 Day	9 Months	N/A
Chloride (Blood)	CL	Metabolic	ISE	Serum	1 Week	1 Week	1 Year	1 Year
Chloride (Urine)	CL	Metabolic	ISE	Urine	1 Week	2 Weeks	1 Year	1 Year
Cholesterol, High Density Lipoprotein (Direct)	HDL-C	Metabolic	Enzymatic	Serum	3 Days	3 Weeks	1 Month (Study Ongoing)	1 Month (Study Ongoing)
Creatine Kinase	CK, CPK	Metabolic	Kinetic	Serum	10 Days	1 Month	1 Month	1 Week
Creatinine (Blood)		Metabolic	Jaffe	Serum	1 Month	2 Months	1 Year	1 Year
Creatinine (Enzymatic)		Metabolic	Enzymatic	Serum	8 Days	17 Days	8 Months (Ongoing)	8 Months (Ongoing)
Creatinine Clearance		Metabolic	Calculation	Calculation	N/A	N/A	N/A	N/A
Cytochrome C		Metabolic	EIA	Serum	1 Week	1 Week	7 Months	7 Months
Ferritin		Metabolic	ECLIA	Serum	1 Week	1 Week	1 Year	1 Year
Fibroblast Growth Factor 19	FGF19	Metabolic	EIA	EDTA Plasma; Serum	1 Week	3 Weeks	12 Months	12 Months
Fibulin 3	FBLN3, EFEMP1	Metabolic	EIA	Serum	1 Week	3 Weeks	5 Months (Ongoing)	2 Months
Gamma Glutamyl Transferase	GGT	Metabolic	Kinetic	Serum	3 Weeks	3 Months	1 Year	1 Year
Gamma Glutamyl Transferase, IFCC	GGT (IFCC)	Metabolic	Colorimetry	EDTA Plasma; Serum	3 Weeks	3 Months	1 Year	1 Year
Globulin		Metabolic	Calculation		N/A	N/A	N/A	N/A
Glucose (Blood)		Metabolic	Photometric	Serum	2 Weeks	2 Weeks	1 Year	1 Year
Glucose (Urine)		Metabolic	Photometric	Urine	5 Days	2 Weeks	1 Year	1 Year
Glutamate Dehydrogenase (GLDH)	GLDH	Metabolic	Photometric	Serum	2 Days	2 Weeks	1 Month	2 Months (Ongoing)
Iron		Metabolic	Photometric	Serum	1 Week	3 Weeks	1 Year	1 Year
Iron Binding Capacity, Total	TIBC	Metabolic	Calculation	Calculation	N/A	N/A	N/A	N/A
Iron Binding Capacity, Unsaturated	UIBC	Metabolic	Photometric	Serum	4 Days	1 Week	8 Months	8 Months
Lactate		Metabolic	Enzymatic	Fluoride Plasma	2 Hours	2 Weeks	1 Year	1 Year
Lactate Dehydrogenase	LDH	Metabolic	Enzymatic	Serum	2 Weeks	2 Weeks	1 Month	1 Year
Lipase		Metabolic	Enzymatic	Serum	1 Week	2 Weeks	1 Year	1 Year
Magnesium (Blood)	Mg	Metabolic	Endpoint Photometric	Serum	2 Weeks	2 Weeks	1 Year	1 Year
Magnesium (Urine)	Mg	Metabolic	Endpoint Photometric	Urine	1 Week	2 Weeks	1 Year	1 Year
PCSK9, Proprotein convertase subtilisin kexin 9	PCSK9	Metabolic	EIA	EDTA Plasma; Serum	1 Week	1 Month	Not Stable	19 Months
Phosphorous (Blood)		Metabolic	Endpoint Photometric	Serum	2 Days	3 Days	1 Year	1 Year
Phosphorous (Urine)		Metabolic	Endpoint Photometric	Urine	1 Week	2 Weeks	1 Year	1 Year
Potassium (Blood)	K	Metabolic	ISE	Serum	3 Weeks	3 Weeks	1 Year	1 Year
Potassium (Urine)	K	Metabolic	ISE	Urine	1 Week	2 Weeks	1 Year	1 Year
Prealbumin	Transthyretin, TTR	Metabolic	EIA	Serum	4 Days	3 Weeks	10 Months	10 Months
Protein (Blood)		Metabolic	Colorimetry	EDTA Plasma; Heparin Plasma; Serum	2 Weeks	1 Month	1 Year	1 Year
Protein (Urine)		Metabolic	Colorimetry	Urine	1 Week	6 Months	6 Months	6 Months
Sodium (Blood)	Na	Metabolic	ISE	Lithium Heparin Plasma; Serum	1 Week	1 Week	1 Year	1 Year
Sodium (Urine)	Na	Metabolic	ISE	Urine	1 Week	1 Week	1 Year	1 Year
Transferrin		Metabolic	Turbidity	Serum	2 Weeks	2 Weeks	1 year	1 year

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Analyte	Aliases	Category / Therapeutic Area	Method	Sample Type(s)	Stability (Ambient)	Stability (2-8 C)	Stability (-20 C)	Stability (-70 C)
Urea Nitrogen (Blood)	BUN	Metabolic	Kinetic	Serum	5 Days	2 Weeks	1 Year	1 Year
Urea Nitrogen (Urine)	24 Hr Urine Urea Nitrogen	Metabolic	Enzymatic	Urine	1 Week	2 Weeks	1 Month (Ongoing)	1 Month (Ongoing)
Uric Acid (Blood)	UA	Metabolic	Colorimetry	Serum	1 Week	1 Week	1 Year	1 Year
Uric Acid (Urine)	24 Hr Urine UA	Metabolic	Enzymatic	Urine	1 Week	1 Week	3 Days	1 Month (Ongoing)
Aldolase	ALD	Musculoskeletal	Colorimetry	Serum	2 Days	2 Weeks	2 Weeks	5 Months
Deoxypyridinolines	DPD	Musculoskeletal	EIA	Urine	1 Week	3 Weeks	1 Year	1 Year
Osteocalcin		Musculoskeletal	ECLIA	Serum	8 Hours	3 Days	3 Months	N/A
Parathyroid Hormone, 1-34	PTH 1-34	Musculoskeletal	EIA	EDTA Plasma	1 Day	1 Day	17 Months	17 Months
Parathyroid Hormone, Intact	PTH	Musculoskeletal	ECLIA	EDTA Plasma; Serum	Not Stable	8 Days	1 Year	1 Year
Procollagen Type 1 C-terminal Propeptide	P1CP	Musculoskeletal	EIA	Serum	1 Week	2 Weeks	5 Months	5 Months
Procollagen Type 1 N-terminal Propeptide	P1NP	Musculoskeletal	ECLIA	Serum	1 Week	1 Month	1 Year	1 Year
Telopeptide C Terminal, Type 1 Collagen	Beta Crosslaps, Beta -CTX	Musculoskeletal	ECLIA	EDTA Plasma; Heparin Plasma; Serum	8 Hours	8 Hours	1 Year	1 Year
Vitamin D, 25 OH		Musculoskeletal	ECLIA	Serum	1 Week	2 Weeks	1 Year	1 Year
Albumin (Urine)	Microalbumin	Nephrology	Nephelometry	Urine	7 Days	2 Weeks	1 Month	8 Months
Beta 2 Microglobulin (Blood)		Nephrology	Nephelometry	Serum	2 Weeks	3 Weeks	1 Year	1 Year
Beta 2 Microglobulin (Urine)		Nephrology	Nephelometry	Urine	Not Stable	2 Days	2 Months	N/A
Beta 2 Microglobulin, High Sensitivity (Urine)	hs UR B2M	Nephrology	Nephelometry	Urine	3 Days	3 Days	2 Months	2 Months
Creatinine (Urine)		Nephrology	Jaffe	Urine	1 Week	2 Weeks	1 Year	1 Year
Cystatin C		Nephrology	Nephelometry	Lithium Heparin Plasma; Serum	2 Weeks	5 Weeks	18 Months	18 Months
Cystatin C (Urine)		Nephrology	Immunoassay	Urine	1 Week	2 Weeks	1 Month	1 Month
Electrophoresis, Serum	SPEP	Nephrology	Electrophoresis	Serum	Not Stable	1 Week	1 Month	1 Month
Electrophoresis, Urine	UPEP	Nephrology	Electrophoresis	Urine				
Epidermal Growth Factor	EGF	Nephrology	EIA	Urine	1 Week	3 Weeks	7 Weeks	7 Weeks
Immunofixation, Serum		Nephrology	Electrophoresis	Serum	Not Stable	1 Week	1 Month	1 Month
Immunofixation, Urine		Nephrology	Electrophoresis	Urine	Not Stable	1 Week	1 Month	1 Month
Kidney Injury Molecule - 1	KIM-1	Nephrology	EIA	Urine	1 Week	1 Week	16 Months	16 Months
N-Acetyl-β-D-Glucosaminidase, Urine	NAG	Nephrology	Enzymatic	Urine	1 Week	1 Month	1 Month (Ongoing)	1 Month (Ongoing)
Neutrophil gelatinase-associated lipocalin (Blood)	NGAL	Nephrology	Immunturbidity	EDTA Plasma	2 Days	1 Week	6 Months	6 Months
Neutrophil gelatinase-associated lipocalin (Urine)	NGAL	Nephrology	Immunturbidity	Urine	2 Days	1 Week	5 Months	5 Months
Osmolality	Osmo	Nephrology	Freezing Point Depression	Serum	7 Days	4 Weeks	1 Month (Ongoing)	1 Month (Ongoing)
Osmolality (Urine)	Osmo	Nephrology	Freezing Point Depression	Urine	7 Days	4 Weeks	1 Month (Ongoing)	1 Month (Ongoing)
Transforming Growth Factor, Beta 1 (Urine)	TGF-B1	Nephrology	EIA	Urine	2 Days	1 Week	7 Weeks	7 Weeks
Beta Carotene		Nutritional	UPLC	EDTA Plasma; Serum	3 Weeks	3 Months	4 Months	1 Year
Folate		Nutritional	ECLIA	Serum	Not Stable	2 Days	1 Month	N/A
Vitamin A	Retinol	Nutritional	UPLC	EDTA Plasma; Serum	1 Week	1 Week	9 Months	5 Years
Vitamin B12		Nutritional	ECLIA	Serum	Not Stable	2 Days	2 Months	N/A
Vitamin E, Alpha		Nutritional	UPLC	EDTA Plasma; Serum	1 Week	1 Week	2 Years	5 Years
Vitamin E, Alpha (>1.006)		Nutritional	UPLC	>1.006 density Beta Quant Fraction	N/A	N/A	13 Weeks	13 Weeks
Vitamin E, Alpha (HDL)		Nutritional	UPLC	Precipitated HDL Supernatant	N/A	N/A	13 Weeks	13 Weeks
Vitamin E, Alpha (RBC)		Nutritional	UPLC	EDTA Whole Blood	N/A	5 Days	10 Weeks	13 Weeks
Vitamin E, Gamma		Nutritional	UPLC	EDTA Plasma; Serum	1 Week	1 Week	2 Years	5 Years
Vitamin E, Gamma (>1.006)		Nutritional	UPLC	>1.006 density Beta Quant Fraction	N/A	N/A	13 Weeks	13 Weeks
Vitamin E, Gamma (HDL)		Nutritional	UPLC	Precipitated HDL Supernatant	N/A	N/A	13 Weeks	13 Weeks
Vitamin E, Gamma (RBC)		Nutritional	UPLC	EDTA Whole Blood	N/A	5 Days	10 Weeks	13 Weeks
Alpha Fetoprotein	AFP	Oncology	ECLIA	Serum	1 Week	1 Week	1 Year	1 Year
CA 125	Carbohydrate Antigen 125; Cancer Antigen 125	Oncology	ECLIA	Serum	1 Week	1 Week	1 Year	1 Year
Carcinoembryonic Antigen	CEA	Oncology	ECLIA	Serum	1 Week	1 Week	1 Year	1 Year
CK- 18, M30 Apoptosense	CK,18, soluble caspase-cleaved keratin 18	Oncology	EIA	Citrate Plasma; EDTA Plasma; Heparin Plasma; Serum	2 Days	1 Week	9 Months	9 Months
CK-18, M65 EpiDeath		Oncology	EIA	Serum	1 Day	4 Days	1 Week	11 Months
c-MET	c-Met	Oncology	EIA	Serum	1 Week	1 Month	3 Months (Ongoing)	3 Months (Ongoing)
Fecal Occult Blood	FOB, iFOB	Oncology	Immunochromatography	Feces	8 Days	6 Months	2 Years	N/A
Fibroblast Growth Factor 2 (Urine)	FGF-2	Oncology	EIA	Urine	3 Days	2 Weeks	Not Stable	3 Months
Fibroblast Growth Factor 21	FGF-21	Oncology	EIA	Serum	1 Week	3 Weeks	1 Year	1 Year
Fibroblast Growth Factor 23	FGF-23	Oncology	EIA	Serum	5 Days	1 Week	11 Months	11 Months
Melanoma-Inhibiting Activity/Cartilage-Derived Retinoic Acid-Sensitive Protein	MIA (CD-RAP)	Oncology	EIA	Serum	1 Week	1 Week	5 Months	5 Months
Midkine		Oncology	EIA	Citrate Plasma; Heparin Plasma; Serum	1 Week	1 Week	3 Months	3 Months
Neuron Specific Enolase	NSE	Oncology	ECLIA	Serum	<1 Day	1 Day	3 Months	3 Months
Prostate Specific Antigen	PSA	Oncology	ECLIA	Serum	N/A	5 Days	6 Months	N/A
S-100		Oncology	ECLIA	Serum	<1 Day	2 Days	3 Months	3 Months
Vascular Adhesion Molecule I	VCAM-1, sVCAM-1	Oncology	EIA	Serum	7 Days	2 Weeks	2 Weeks	2 Weeks



## Medpace Reference Laboratories Validated Assays 2019

Analyte	Aliases	Category / Therapeutic Area	Method	Sample Type(s)	Stability (Ambient)	Stability (2-8 C)	Stability (-20 C)	Stability (-70 C)
Vascular Endothelial Growth Factor	VEGF	Oncology	EIA	EDTA Plasma; Serum	1 Week	3 Weeks	33 Months Serum, 1 Year EDTA Plasma	33 Months Serum, 1 Year EDTA Plasma
Vascular Endothelial Growth Factor A	VEGF-A (choose VEGF by R&D Systems instead of BioVendor kit)	Oncology	EIA	Citrate Plasma; EDTA Plasma; Heparin Plasma; Serum	1 Day	5 Days	20 Months	20 Months
Vascular Endothelial Growth Factor Receptor 2	VEGF-R2	Oncology	EIA	EDTA Plasma; Heparin Plasma; Serum	1 Week	1 Week	20 Months	20 Months
Calbindin Meso Scale Kidney Injury Panel 3	CALB (MSD, KIP-3)	Renal	ECLIA	Urine	1 Day	1 Day	1 Day	1 Month
Ceruloplasmin		Renal	Immunturbidity	Serum	3 Days	1 Week	3 Months	7 Months
Clusterin Meso Scale Kidney Injury Panel 3	Apolipoprotein J, CLU, AAG4, APO-J, APOJ, CLI, CLU1, CLU2, KUB1, NA1/NA2, SGP-2, SGP2, SP-40, TRPM-2, TRPM2, (MSD, KIP-3)	Renal	EIA	Urine	2 Days	Not Stable	Not Stable	1 Month (40-55% decline after initial freezing)
Kidney Injury Molecule - 1 Meso Scale Kidney Injury Panel 3	KIM-1, TIM-1, HAVcr-1, (MSD, KIP-3)	Renal	EIA	Urine	1 Day	Not Stable	Not Stable	1 Month (15-30 % decline after initial freezing)
Osteoactivin Meso Scale Kidney Injury Panel 3	OA, GPNMB, HGFN, NMB, glycoprotein nmb, PLCA3, (MSD, KIP-3)	Renal	EIA	Urin	1 Day	Not Stable	3 Weeks	1 Month
Trefoil Factor 3 Meso Scale Kidney Injury Panel 3	TFF3, ITF, P1B, TFI, (MSD, KIP-3)	Renal	EIA	Urine	N/A	N/A	N/A	N/A
Vascular Endothelial Growth Factor Meso Scale Kidney Injury Panel 3	VEGF, VPF, Vascular Permeability Factor (MSD, KIP-3)	Renal	EIA	Urine	Not Stable	Not Stable	Not Stable	1 Month (25-35% decline after initial freezing)
RNA Concentration		RNA	RNA Extraction	EDTA Whole Blood	3 Days	5 Days	8 Years	8 Years
RNA Integrity Number	RIN	RNA	RNA Extraction	EDTA Whole Blood	3 Days	5 Days	8 Years	8 Years
RNA Yield		RNA	RNA Extraction	EDTA Whole Blood	3 Days	5 Days	8 Years	8 Years
Urinalysis, Chemical Profile (bilirubin, blood, color, glucose, ketone, leukocyte esterase, nitrite, pH, protein, specific gravity, urobilinogen)	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Clarity	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Bilirubin	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Blood	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Color	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Glucose	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Ketone	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Leukocyte esterase	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Nitrite	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: pH	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Protein	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Specific gravity	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Chemical Profile: Urobilinogen)	UA, Dipstick	Urinalysis	Colorimetry	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Urinalysis, Confirmation: Ictotest		Urinalysis	Manual	Urine	3 Days	3 Days	N/A	N/A
Urinalysis, Confirmation: Protein by Acidification		Urinalysis	Colorimetry	Urine	3 Days	3 Days	N/A	N/A
Urinalysis, Confirmation: Specific Gavity		Urinalysis	Refractometry	Urine	3 Days	3 Days	N/A	N/A
Urinalysis, Microscopic Profile (bacteria, casts, crystals, RBC, WBC)		Urinalysis	Manual	Urine	3 Days	3 Days	Do not freeze	Do not freeze
Genotyping, Apolipoprotein E	Apo E Genotyping, Apo E by Sanger Sequencing	Various	Molecular	EDTA Whole Blood	24 Hours	5 Days	Do not freeze	Do not freeze
Genotyping, Transthyretin (TTR)	TTR Geneotyping, TTR by Sanger Sequencing	Various	Molecular	EDTA Whole Blood	24 Hours	5 Days	Do not freeze	Do not freeze
CYFRA21-1	Cytokeratin 19 Fragment		CLIA	K3 EDTA Plasma; Lithium Heparin Plasma; Sodium Heparin Plasma; Serum	4 Days	4 Days	12 Months	12 Months
Fibroblast Growth Factor 23, C-terminal	FGF-23, cFGF-23		EIA	K2 EDTA Plasma	7 Days	14 Days	1 Month (Ongoing)	1 Month (Ongoing)
Fibroblast Growth Factor 23, Intact	FGF-23 (intact); iFGF-23		EIA	K2 EDTA Plasma	1 Day	1 Day	1 Month (Ongoing)	1 Month (Ongoing)
Peripheral Blood Mononuclear Cells (PBMC)	PBMC		Centrifugation	Citrate Whole Blood; EDTA Whole Blood; Sodium Heparin Whole Blood	48 Hrs	N/A	N/A	N/A
Transferrin Receptor, soluble	sTfR		Nephelometry	Serum	1 Week	1 Week	1 Month	1 Month