

TRANSLATIONAL BIOMARKER ASSAYS

Our expertise in biomarker analysis **supports critical go/no-go decision** making by providing insight into a drug's **efficacy, safety, and mechanism of action**. Assessed early in the drug development process, biomarker assays can **validate targets and identify potential toxicity**. Altasciences has vast experience in developing assays for screening, qualification, or fit-for-purpose validations, and our team of experts can help guide you in selecting the most appropriate assay based on the context of use.

Altasciences' Platforms and Instruments

Our Laboratory Sciences Division has extensive experience with a wide spectrum of biological matrices supporting both preclinical and clinical investigations, and are equipped with state-of-the-art instruments, allowing highly sensitive and specific assay development aligned with biomarker determinations by LBA or LC/MS.

LBA scientists leverage a wide range of platforms to develop biomarker assays based on study needs. BioTek Synergy microplate readers offer flexibility across a broad range of applications such as absorbance, luminescence, and fluorescence methods. Our multiplexing capabilities are supported by numerous MSD readers (S 600 and Quickplex SQ 120) that produce highly sensitive and customizable electro-chemiluminescent assays. We also work with the Luminex 200 system, which utilizes microsphere technology to allow simultaneous detection of over 20 protein analytes. Additionally, our ELISPOT and flow cytometers provide rapid and quantitative analysis of biomarkers at the single cell level.

LC/MS scientists are supported with over 30 mass spectrometers including SCIEX API 5000, 5500 and 6500+ Triple Quads and Thermo Scientific Q-Exactive Orbitrap's for next-level high resolution and accurate mass determinations. Additionally, efficient workflows have been developed combining highly selective hybridization approaches to sample extraction with LC-MS detection, thereby facilitating protein biomarkers determination.



Altasciences' Biomarkers by Indication

	INDICATION	ANALYTE		SPECIES	MATRIX	PLATFORM	
Clinical Biomarker Assays	Inflammatory	IL-10 IL-1β	IL-6 TNF-α	Human	Plasma	ECLIA	
		Interleukin-1 Beta		Human	Urine	ECLIA	
		Interleukin-6	TNF-α	Human	Serum	ECLIA	
		Monocyte Chemoattractant Protein-1		Human	Urine	ELISA	
		IFN-γ IL-10 IL-12p70 IL-1β IL-2	IL-4 IL-6 IL-8 IL-13 TNF-α	Human	Serum	ECLIA	
		GM-CSF IL5 MCP1	CCL3 CCL4	Human	Serum	ECLIA	
		IL17A		Human	Serum	ECLIA	
		CCL5		Human	Serum	ECLIA	
		Ferritin		Human	Plasma	ELISA	
		Metabolic	Ceruloplasmin		Human	Serum	ELISA
			Ceruloplasmin Ferroxidase Activity		Human	Serum	ELISA
			C-Reactive protein (CRP)		Human	Plasma	ELISA
			Creatinine		Human	Urine	ELISA
			Estradiol		Human	Plasma	MS/MS API 5000
	Glucagon		Human	Plasma	MS/MS API 5000		
	Levothyroxine		Human	Serum	MS/MS API 5000		
	Testosterone/Dihydrotestosterone		Human	Plasma	MS/MS API 5000		
	Ferritin		Human	Plasma	ELISA		
	Glucagon		Human	Plasma	ELISA		
	Magnesium		Human	Serum	ELISA		
	Sex Hormone Binding Globulin (SHBG)		Human	Serum	ECLIA		
	Reproductive	Follicle-stimulating hormone (FSH)		Human	Serum	ELISA	
		Luteinizing hormone (LH)		Human	Serum	ELISA	
	Oxidative stress and cardiovascular	8-Hydroxy-2-deoxyguanosine		Human	Urine	ELISA	
		Butyrylcholinesterase		Human	Plasma	ELISA	
		Cortisol (hydrocortisone)		Human	Plasma	MS/MS API 5000	
		Cortisol (hydrocortisone)/ 6-beta-Hydroxycortisol		Human	Urine	MS/MS API 5000	
		D-Dimer		Human	Plasma	ELISA	
		Endothelin-1		Human	Plasma	ELISA	
		Glutathione (total)		Human	Plasma	ELISA	
		Heparin		Human	Plasma	ELISA	
		Hs-Troponin T		Human	Plasma	ECLIA	
		Lipid Peroxidation (Thiobarbituric Acid Reactive Substances (TBARS))		Human	Urine	ELISA	
		NT-proBNP		Human	Plasma	ECLIA	
		Protein carbonyl		Human	Serum	ECLIA	
		Superoxide Dismutase Activity		Human	Serum	ELISA	
		Total Antioxidant Capacity (Trolox)		Human	Serum	ELISA	

Altasciences' Biomarkers by Indication

Preclinical Biomarker Assays					
INDICATION		ANALYTE	SPECIES	MATRIX	PLATFORM
Inflammatory		Clusterin	Rat	Urine	ECLIA
		Complement Bb	Monkey	Plasma	ELISA
		Complement C3a	Monkey	Plasma	ELISA
		IFN-γ	Monkey (Panel 1)	Serum	ECLIA
		IL-10			
		IL-12/IL-23p40			
		IL-1β			
		IL-2			
		IL-2	Monkey	Serum and Cell Culture Supernatants	ECLIA
		IL-6			
		IFN-γ			
Metabolic		Creatinine	Rat	Urine	ECLIA
Oxidative stress and cardiovascular		Cystatin-C	Rat	Urine	ECLIA
		KIM-1 NGAL OPN	Rat	Urine	ECLIA
Gene Therapy		AAV8 Total Antibody	Monkey	Serum	ECLIA
		AAV8 Neutralizing Antibody	Monkey	Serum	Cell based

Our experts are always developing new assays. If the assay you need is not here, contact us to see how we can support you.

Consult our **ASSAY LIST**, updated monthly, which includes all currently available assays, including biomarkers.

