

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 30 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 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-1 $\beta$	IL-6 TNF- $\alpha$	Human	Plasma	ECLIA
		Interleukin-1 Beta		Human	Urine	ECLIA
		Interleukin-6	TNF- $\alpha$	Human	Serum	ECLIA
		Monocyte Chemoattractant	Protein-1	Human	Urine	ELISA
		IFN- $\gamma$		Human	Serum	ECLIA
		IL-10 IL-12p70 IL-1 $\beta$ IL-2 IL-4	IL-6 IL-8 IL-13 TNF- $\alpha$	Human	Serum	ECLIA
		GM-CSF IL5 MCP1	CCL3 CCL4	Human	Serum	ECLIA
		IL17A		Human	Serum	ECLIA
		CCL5		Human	Serum	ECLIA
		Metabolic	Ceruloplasmin		Human	Serum
	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
	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

	INDICATION	ANALYTE	SPECIES	MATRIX	PLATFORM	
Preclinical Biomarker Assays	Inflammatory	Clusterin	Rat	Urine	ECLIA	
		Complement Bb	Monkey	Plasma	ELISA	
		Complement C3a	Monkey	Plasma	ELISA	
		IFN- $\gamma$ IL-10 IL-12/IL-23p40 IL-1 $\beta$ IL-2	IL-4 IL-6 IL-8 MCP-1 TNF- $\alpha$	Monkey (Panel 1)	Serum	ECLIA
		C4d	Monkey	Plasma	ELISA	
		SC5b-9	Monkey	Plasma	ELISA	
		IL-1RA IL-5 IL-13 IL-15	IL-17A IL-18 MIP-1B GM-CSF	Monkey	Serum	ECLIA
		Metabolic	Creatinine	Rat	Urine	ECLIA
			Oxidative stress and cardiovascular	Cystatin-C	Rat	Urine
	KIM-1 NGAL OPN	Rat		Urine	ECLIA	

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.

