

Cellular & Metabolism Assays

Over 500 Assays for Metabolism, Cell Health, Food, Environmental & HTS Applications



About Assay Genie




Discover Assay Genie's comprehensive suite of over 1,000 high-quality assays designed for clarity and sensitivity in research. Our advanced cellular and biochemical assays catalyse breakthroughs in drug discovery, metabolic analysis, vaccine development, and research in cancer, neuroscience, and immunology. Empower your scientific discovery with assays crafted for precision and ease, accelerating validation and insights.



COLM RYAN PhD
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-  **Extensive citation hub**
-  **Dedicated customer support**
-  **Fast Delivery**
-  **Unique Product Range**
-  **Cuvette, 96-well, 384-well formats**
-  **Colorimetric and Fluorometric Assays**

Research Areas

Amino Acid and Protein
Annexin
Antioxidant
Apoptosis
ATP and Related
Cation and Inorganic Ion
Cell Biology
Cell Health
Cell Viability & Proliferation
Clinical Chemistry
Diabetes & Obesity

Enzyme Activity
Ferroptosis
Food Safety & Analysis
Gasotransmitter Biology
Glucose Uptake
Glycolysis & Carbohydrates
High-Throughput Screening
Kidney Biomarker
Lipid Metabolism
Lipid Peroxidation
Liver Biomarker

Liver function
Metabolism
Mycoplasma Testing
Oxidative Stress
Pentose Phosphate
Plant & Environmental Stress
Reactive Oxygen Species
TCA Cycle
TUNEL 1-Step Kits
Urea

Fatty Acid Oxidation Assay (BR0001)

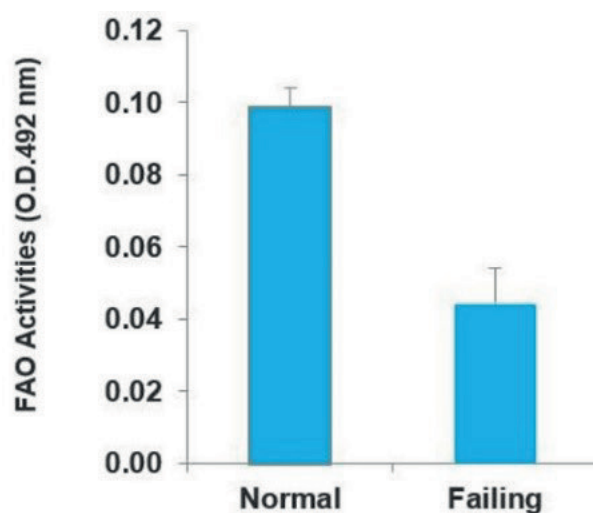
Traditional Fatty Acid Oxidation assays often rely on substrates like long-chain fatty acids, which can pose challenges due to their lower solubility and potential off-target effects. However, these substrates might also interact with unrelated cellular processes, leading to erroneous experimental outcomes. To overcome these limitations, Assay Genie have developed a Fatty Acid Oxidation Assay kit that utilizes a highly soluble Octanoyl-CoA substrate. This unique approach ensures accurate quantification of Fatty Acid Oxidation, overcoming the limitations associated with longer-chain and less-soluble substrates like the 18C unsaturated fatty acid oleate.

Key Features

REAL DATA: Directly measures FAO in cells and tissues by utilizing a highly soluble Octanoyl-CoA substrate which enables the accurate measurement of Fatty Acid Oxidation versus longer chain less-soluble substrates such as the 18C unsaturated fatty acid oleate.

SIMPLE: 120-minute assay with no special instrumentation required.

VERSATILE: Colorimetric assay format with adherent or suspension cells & tissues.



A) Tissue homogenates were prepared from normal hamster heart (F1B strain) and failing heart (TO2 strain). FAO activities were assayed by the FAO Assay kit, showing that the failing hamster heart exhibits reduced capacity for fatty acid oxidation.

Citations

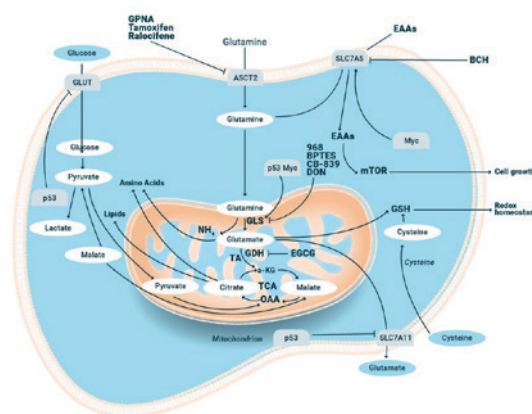
Standage et al. NMR-based serum and urine metabolomic profile reveals suppression of mitochondrial pathways in experimental sepsis-associated acute kidney injury *American Journal of Physiology-Renal Physiology* (2021)

Rajala et al. Insulin-like growth factor 1 receptor mediates photoreceptor neuroprotection *Cell Death & Disease* 2022

Trompette et al. Gut-derived short-chain fatty acids modulate skin barrier integrity by promoting keratinocyte metabolism and differentiation *Mucosal Immunology* 2022

Enzyme Activity Assays

At Assay Genie, we have a range of sensitive and high-quality Enzyme Activity Assays. Enzyme activity assays are vital techniques used to detect the presence or measure the activity of specific enzymes. As enzymes are pivotal in driving cellular reactions, understanding their activity can shed light on overall cell functions and the chemical processes they govern.



Enzyme Activity Assays

Product Name	Microplate Reader	Spectrophotometer	Sample Type
Acid Phosphatase Activity Assay	MAES0082	MAES0083	Serum, Plasma, Urine, Tissue, Cells
Aconitase Assay	BA0070		Biological Samples
Alanine Aminotransferase Activity Assay	MAES0156	MAES0157	Serum, Plasma, Animal Tissue
Alkaline Phosphatase Activity Assay	MAES0080	MAES0081	Serum, Plasma, Tissue
Alpha-Mannosidase Activity Assay	BA0014		Biological Samples
Alpha-Amylase Assay	BA0082		Blood, Saliva, Urine, Agricultural
Arginase Activity Assay	BA0016		Enzyme Preparations, Serum, Plasma
Aspartate Amino transferase Activity Assay	MAES0158	MAES0159	Serum, Plasma, Animal Tissue
Aspartate Transaminase Activity Assay	BA0079		Serum, Plasma
Catalase (CAT) Activity Assay	MAES0044	MAES0045	Serum, Plasma, Cells, Tissue
Creatine Kinase Activity Assay	BA0094		Serum, Plasma
Diamine Oxidase Assay	BA0172		Serum, Plasma
Fumarase Activity Assay	BA0105		Biological Samples
Glucose Oxidase Assay	BA0116		Cell Lysate, Cell Culture Media
Glucose-6-Phosphate Dehydrogenase Activity Assay	BA0027		Serum, Plasma, Animal Tissue
Glutamate Dehydrogenase Activity Assay	BA0025		Serum, Plasma, Cells, Tissue, Agricultural
Glutathione Reductase Assay	BA0087		Plasma, Serum, Tissue, Culture Media
Glutathione-S-Transferase Activity Assay	MAES0197	MAES0169	Serum, Plasma, Tissue, Cells
Glyoxalase I Activity Assay	BA0026		Enzyme Preparations, Biological Samples
HRP Detection Reagent	BA0173		Biological
Invertase Activity Assay	BA0123		Biological
Isocitrate Dehydrogenase Assay	BA0038		Plasma, Serum, Tissue, Culture Media
Kinase Assay	BA0125		All kinases
Lactate Dehydrogenase Cytotoxicity Assay	MAES0058	MAES0059	Serum, Plasma, Tissue, Cells
LDH Assay/ Lactate Dehydrogenase Assay	BA0006		Serum, Plasma
Leucine Aminopeptidase Activity Assay	MAES0190		Serum, Plasma, Animal Tissue
Lipase Activity Assay	BA0052		Serum, Plasma, Saliva, Urine
Malate Dehydrogenase Assay	BA0131		Biological Samples
Monoamine Oxidase Assay	BA0130		MAO Enzyme Preparations

Enzyme Activity Assays

Product Name	Microplate Reader	Spectrophotometer	Sample Type
Myeloperoxidase Activity Assay	MAES0076	MAES0077	Serum, Plasma, Animal Tissue
Neuraminidase Activity Assay	BA0135		Biological Samples
Nitric Oxide Synthase Inhibitor Screening	BA0189	BA0189	Nitric Oxide Synthase
Phospholipase D Activity	BA0144		Biological Samples
Polyphenol Oxidase Activity Assay	MAES0163	MAES0164	Plant Tissue
Pyruvate Kinase Activity Assay	BA0145		Plasma, Serum, Cells, Tissue
Sorbitol Dehydrogenase Assay	BA0056		Biological Samples
Sucrase Activity Assay	MAES0192		Animal Tissue
Superoxide Dismutase Activity Assay	BA0150		Blood, Cells, Tissue
Total Superoxide Dismutase Activity Assay	MAES0034		Serum, Plasma, Hydrothorax, Ascites, Urine, Cells
Tyrosine Ammonia-lyase Activity Assay	MAES0201		Fruit Juices, Plant and Animal Tissue
Urease Activity Assay	BA0061		Biological, Environment
Xanthine Oxidase Assay	BA0155		Cell lysate, Serum and Other Biological Samples
γ -Glutamyl Transferase Activity Assay	MAES0103		Serum, Plasma, Animal Tissue

ATP & Related Assays

Product Name	Microplate Reader	Spectrophotometer	Sample Type
ATP Chemiluminescence Assay Kit	MAES0002		Animal Tissue
ATP Colorimetric Assay Kit	MAES0118	MAES0119	Animal tissue, Cells
HK ATPase Activity Assay Kit		MAES0100	Animal tissue, Cells
Ca ²⁺ ATPase Activity Assay Kit		MAES0146	Animal Tissue
NaK ATPase Activity Assay Kit	MAES0188		Serum, Plasma, Animal Tissue

Oxidative Stress Assays

Oxidative Stress refers to an imbalance between the production of ROS (reactive oxygen species) and the body's ability to detoxify the resulting damage. ROS are produced naturally as a byproduct of cellular metabolism, but levels can dramatically increase in response to environmental stressors like UV radiation, pollutants, and toxins. Assay Genie stocks simple & sensitive assays to investigate oxidative stress in a range of sample types.

Antioxidant Assays			
Product Name	Microplate Reader	Spectrophotometer	Sample Type
Antioxidant Assay	BA0059		Serum, Plasma, Urine
Ascorbic Acid Assay	BA0077		Serum, Plasma, Urine
Catalase Activity Assay	BA0083		Serum, Plasma, Tissue
Formate Assay	BA0108		Serum, Plasma, Urine
Glutathione Assay	BA0042		Serum, Plasma, Urine
Glutathione Peroxidase Activity Assay	MAES0084		Serum, Plasma, Cell Culture Supernatant
Glutathione Reductase Activity Assay		MAES0088	Serum, Plasma, cell culture supernatant
Glutathione-S-Transferase Activity Assay	MAES0197	MAES0169	Serum, Plasma, Tissue, Cells
GSH/GSSG Assay	BA0118		Whole blood, Plasma, Serum
Myeloperoxidase Activity Assay	MAES0076	MAES0077	Serum, Plasma, Animal Tissue
Myeloperoxidase Peroxidation Activity Assay	MAES0004		Serum, Plasma, Animal Tissue
NAD/NADH Assay	BA0106		Cell/Tissue Extracts
NADP/NADPH Assay	BA0092		Animal Tissue, Cells
Nitrite Colorimetric Assay		MAES0072	Serum, Plasma, Saliva, Tissue, Cells
Peroxidase Activity Assay	MAES0152	MAES0153	Plant Tissue
Peroxidase Activity Assay		MAES0151	Serum
Protein Carbonyl Assay	MAES0096	MAES0097	Serum, Plasma, Hydrothorax, Tissue
Reduced Glutathione Colorimetric Assay	MAES0042		Serum, Plasma, Cell Culture Supernatant
Total Sulfhydryl Group/Total Thiol Assay	MAES0167		Serum, Plasma, Animal Tissue
Vitamin C Colorimetric Assay	MAES0048	MAES0049	Serum, Plasma, Tissue
Vitamin E Colorimetric Assay	MAES0046	MAES0047	Serum, Plasma, Tissue
Xanthine Oxidase Activity Assay	MAES0006		Serum, Plasma, Animal Tissue

Reactive Oxygen Species (ROS) Assays			
Product Name	Microplate Reader	Spectrophotometer	Sample Type
Reactive Oxygen Species Assay	MAES0112		Tissue, Cultured Cells
Total Superoxide Dismutase Activity Assay	MAES0034		Serum, Plasma, Hydrothorax, Ascites, Cells
GSH/GSSG Assay	BA0118		Whole blood, Plasma, Serum
Reduced Glutathione Assay	MAES0042		Serum, Plasma, Tissue
Nitric Oxide Assay	MAES0050		Serum, Plasma, Tissue
Hydrogen Peroxide Colorimetric Assay	MAES0089		Serum, Plasma, Tissue, Cells
Hydroxyl Free Radical Scavenging Capacity Assay	MAES0187		Serum, Plasma, Animal Tissue
Monoamine Oxidase Inhibitor Screening		BA0188	Monoamine Oxidase
Total Oxidant Status Assay	MAES0199		Tissue, Serum

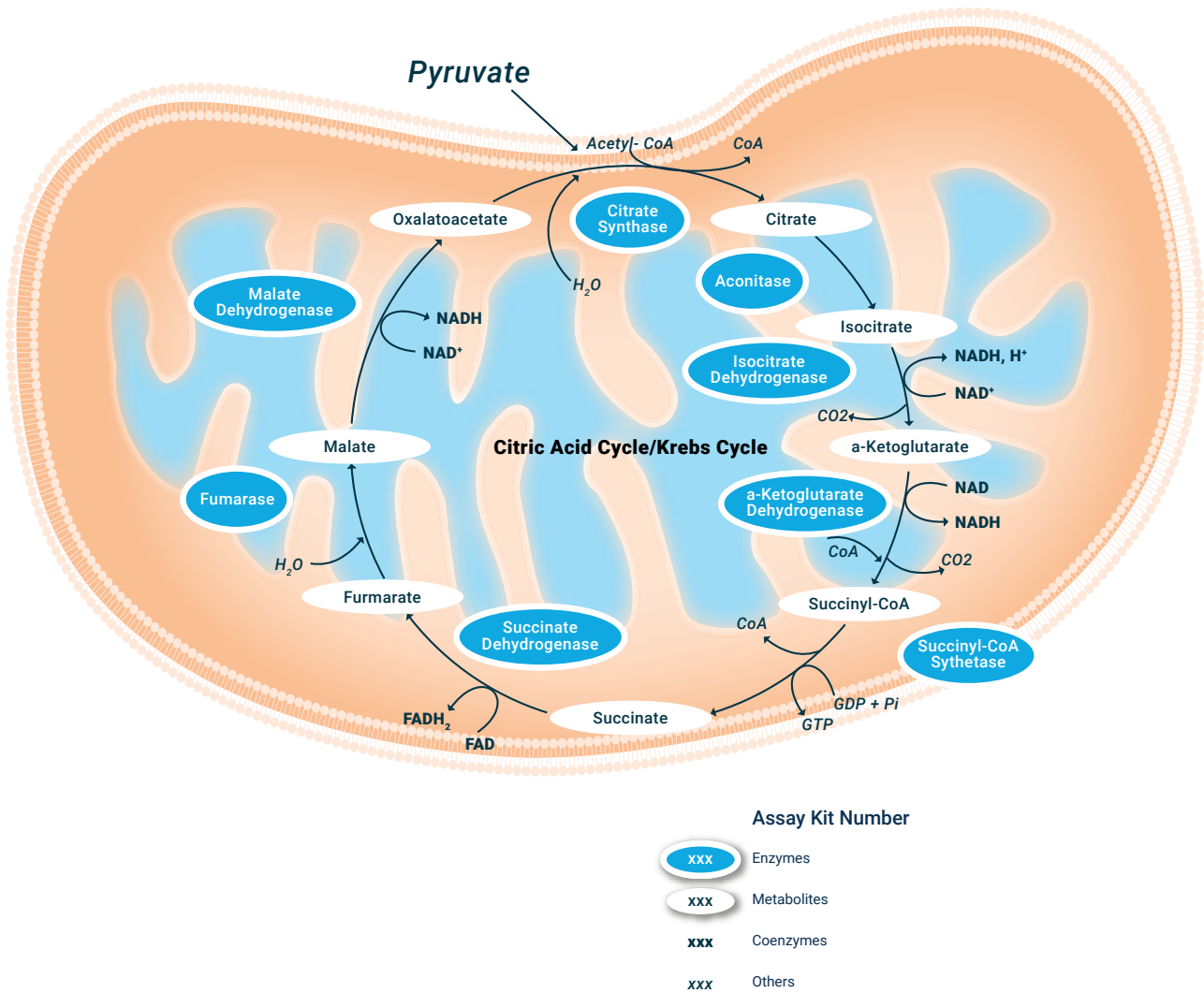
Lipid metabolism and peroxidation Assays

Lipid metabolism is the process where fats are either converted into energy or into new structural or functional lipids. This complex, essential system manages different fats, including cholesterol and phospholipids, ensuring overall health. Assay Genie's range of Lipid Metabolism and Peroxidation Assays allows for the comprehensive analysis of beta-oxidation, cholesterol metabolism, phospholipid metabolism and various other processes involved in lipid metabolism.

Product Name	Microplate Reader	Spectrophotometer	Sample Type
Malondialdehyde Assay Kit	MAES0037	MAES0038	Serum, Plasma, Animal Tissue, Plant Tissue
Lipid Peroxide Assay Kit	MAES0132		Serum, Plasma, Urine, Tissue
TBARS Assay Kit Assay Kit	MAES0173	BA0060	Serum, Plasma, Animal Tissue
Fatty Acid Oxidation Assay	BR00001		Microplate Reader
Fatty Acid Uptake Assay Kit		BA0184	Adipocytes, Fatty Acid Transporting Cells
Free Fatty Acid Measurement Kit		BA0101	Serum, Plasma, Urine, Cells
Triglyceride Assay Kit		BA0152	Serum, Plasma
Cholesterol Assay Kit		BA0064	Serum, Plasma
HDL and LDL/VLDL Assay Kit		BA0066	Serum
HDL and LDL/VLDL Assay Kit		BA0119	Serum
Adipolysis Assay Kit		BA0076	Culture Media
Lipid Peroxide Assay Kit		MAES0132	Serum, Plasma, Cell Culture supernatant
Phospholipase D Assay Kit		BA0144	Biological
Phospholipid Assay Kit		BA0143	Biological
Acetylcholinesterase Activity Assay Kit	MAES0131		Serum, Plasma, Culture supernatant
Creatinine Assay		MAES0138	Serum

TCA and Pentose Phosphate Assays

The Citric Acid Cycle plays an important role in the production of energy, in synthesis of biomolecules and in the regulation of metabolism. The Cycle is a central pathway in metabolism and is essential for life. The TCA Cycle occurs in the mitochondria, where oxygen is used to complete the cycle. It is composed of eight reactions, each catalysed by a specific enzyme. These reactions convert acetyl CoA into carbon dioxide and water, while producing ATP and NADH. At Assay Genie we've developed a range of TCA assays for researchers to analyse key steps in the pathway.



TCA Cycle Assays

Product Name	Microplate Reader	Spectrophotometer	Luminometer	Sample Type
Acetate Assay	BA0140	BA0140		Serum, Plasma, Food, Agricultural
Aconitase Assay		BA0070		Tissues, Cells
ADP Assay	BA0063		BA0072	Cells, Biological Samples
ADP/ATP Ratio Assay			BA0127	Cells

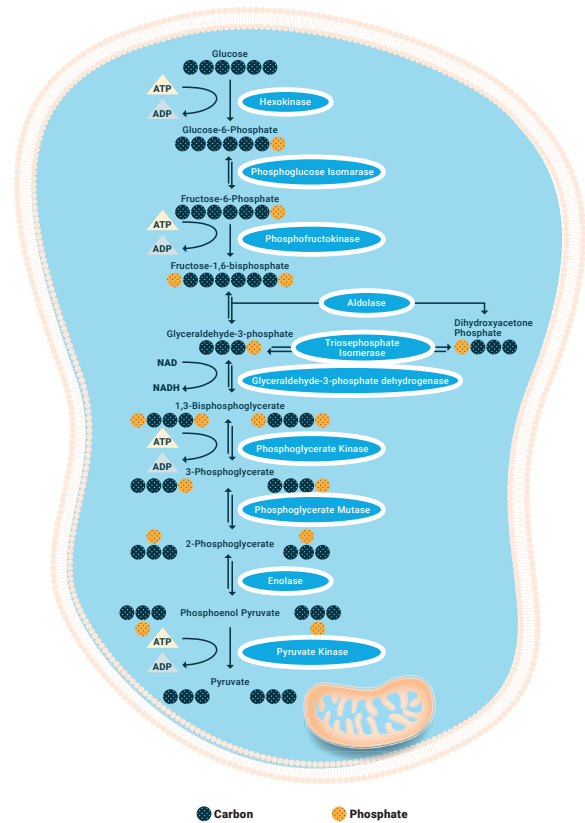
TCA and Pentose Phosphate Assays

TCA Cycle Assays				
Product Name	Microplate Reader	Spectrophotometer	Luminometer	Sample Type
ATP Assay	MAES0119	MAES0118	BA0080	Serum, Plasma, Urine
Citrate Assay		BA0090		Tissue, Cells
Citric Acid (CA) Assay		MAES0179		Tissue, Cells
D-Lactate Assay	BA0100	BA0097		Serum, Plasma, Cell Culture Media
Ferrous Iron Assay	MAES0206	BA0108		Tissue, Mitochondria, Cells
Formate Assay	BA0108			Urine, Serum, Plasma
Fumarase Activity Assay		BA0105		Tissues, Cells
Fumarate Assay		BA0110		Cells, Tissue
Glutamate Dehydrogenase Activity Assay		BA0025		Serum, Plasma, Cell, Tissue, Agricultural
Isocitrate Assay	BA0103	BA0103		Food, Beverage, Biological Samples
Isocitrate Dehydrogenase Assay		BA0038		Tissues, Cells
L-Glutamate Quick Test Strip	BA0198			Soups, Sauces, Milk
L-Lactate Assay	BA0104	BA0091		Serum, Plasma, Cell Culture Media
Malate Assay		BA0129		Cells, Tissue
Malate Dehydrogenase Assay		BA0131		Tissues, Cells
Maltose Assay	BA0132	BA0132		Serum, Urine, Food, Beverages
NAD/NADH Assay		BA0106		Cells, Tissue Extracts
NADP/NADPH Assay	BA0107	BA0200		Cells, Tissue
Oxalate Assay		BA0141		Urine, Animal and Plant Tissue Samples
Oxaloacetate Assay	BA0139	BA0139		Cells, Tissue
Pyruvate Assay	BA0146	BA0146		Biological
Pyruvate Kinase Activity Assay	BA0145	BA0145		Plasma, Serum, Cell and Tissue
Succinate Assay	BA0149			Cells, Tissue
Total Iron Assay		MAES0205		Cells, Tissue

Pentose Phosphate Assays		
Product Name	Microplate Reader	Sample Type
Glucose-6-Phosphate Assay Kit	BA0111	Plasma, Serum, Tissue, Culture Media
Glucose-6-Phosphate Dehydrogenase (G6PD) Assay Kit	BA0027	Plasma, Serum, Tissue, Culture Media
NADP+/NADPH Assay	BA0200	Cells, Tissue

Glycolysis and related Assays

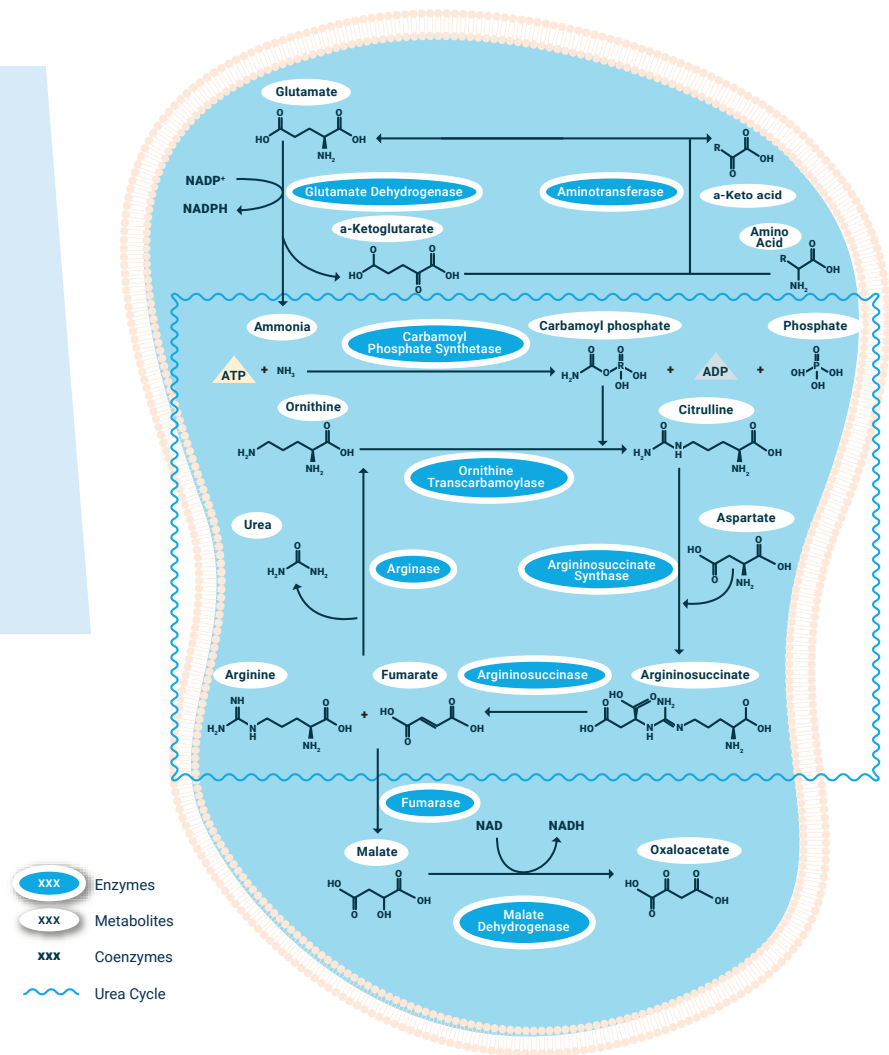
Glycolysis, the initial metabolic route transforming glucose to pyruvate, is central to cellular energy output. Functioning in the cytosol, this pathway produces ATP and NADH through ten enzymatic reactions. The enzymatic activity assays, especially for pivotal enzymes like hexokinase and phosphofructokinase, are integral to evaluating glycolytic efficiency and dynamics. At Assay Genie we've developed a range of Glycolysis & Carbohydrates assays for researchers to analyse key indicators in the glycolysis pathway including glycogen, glucose, pyruvate, lactic acid & more in a range of sample types.



Product Name	Microplate Reader	Spectrophotometer	Luminometer	Sample Type
ADP Assay	BA0063			Cells, Tissue
ADP/ATP Ratio Assay			BA0127	Cells
ATP Assay	MAES0118	MAES0119	BA0080	Cells, Tissue
D-Lactic Acid/Lactate Assay	MAES0015			Serum, Plasma, Animal Tissue
D-Xylose Assay		MAES0031		Serum, Plasma, Urine
G6PD Activity Assay	MAES0064			Serum, Plasma, Animal Tissue
Glucose Assay	BA0081			Serum, Plasma, Biological Fluids
Glucose Uptake Assay	MAES0012			Cells
G6P Assay	MAES0025			Plasma, Serum, Cell Culture Media
Glycogen Assay	BA0065			Animal Liver, Muscle Tissue
Lactase Activity Assay	MAES0106			Animal Tissue
Lactate dehydrogenase Activity Assay	MAES0195			Serum, Plasma, Tissue, Hydrothorax, Cells
L-Lactic Acid/Lactate Assay	MAES0056	MAES0057		Serum, Plasma, Cell Culture Supernatant
NAD/NADH Assay	BA0067			Cells, Tissue Extracts
NADP+/NADPH Assay	BA0200			Cells, Tissue Extracts
Pyruvate Assay	BA0146			Biological
Sucrase Activity Assay	MAES0192			Animal tissue
Sucrose Assay	BA0151			Serum, Plasma, Urine, Agricultural

Urea Cycle Assays

Urea Cycle, the primary nitrogen detoxification route, transforms ammonia to urea in eukaryotic cells. Predominantly located within the liver's mitochondria and cytosol, this pathway is essential for managing nitrogen waste. Through a series of intricately regulated steps, it not only detoxifies ammonia but also plays a role in the synthesis of arginine, ornithine, and citrulline, key amino acids in cellular metabolism. Assay Genie offers a range of unique and sensitive Urea assays for researchers to analyse key steps in the Urea Pathway.



Metabolites			
Product Name	Microplate Reader	Spectrophotometer	Sample Type
Urea Assay	BA0050		Serum, Plasma, Saliva, Urine
Urea (BUN) Assay		MAES0178	Serum, Plasma, Saliva, Urine
Uric Acid Assay	BA0049	BA0049	Serum, Plasma, Urine

Enzymes			
Product Name	Microplate Reader	Spectrophotometer	Sample Type
Ammonia Assay	BA0137		Serum, Plasma, Urine, Saliva, Cell Culture
Aspartate Assay	BA0078		Plasma, Serum, Tissue, Culture Media
Fumarate Assay	BA0110		Food, beverage, Other Biological Samples
Glutamate Assay	BA0114		Serum, Plasma, Urine, Cells, Tissue
Malate Assay	BA0129		Food, Beverage, Agricultural
Oxaloacetate Assay	BA0139		Plasma, Serum, Tissue, Cell culture Media
Phosphate Assay	BA0165		Enzyme reactions with free phosphate releases

Clinical Chemistry Assays

Clinical Chemistry Assays			
Product Name	Microplate Reader	Spectrophotometer	Sample Type
Acetate Assay	BA0140		Serum, Plasma, Agricultural, Environmental
Acetylcholine Assay	BA0069		Serum, Plasma, Urine, Saliva, Cell Culture
Acid Phosphatase Activity Assay	BA0010		Biological
Alanine Assay	BA0073	BA0073	Plasma, Serum, Urine, Tissue, Culture Media
Alcohol dehydrogenase Activity Assay	BA0011		Plasma, Serum, Urine, Tissue, Culture Media
Alpha-Glucosidase Activity Assay	BA0012		Biological
alpha-L-Fucosidase Assay	BA0023		Plasma, Serum, Tissue, Cell Lysate
Ammonia Assay	BA0054		Biological, Environmental
Amylase Assay (ECAM-100)	BA0082		Blood, Saliva, Urine, Agricultural
Ascorbic Acid Assay	BA0077		Serum, Plasma, Urine, Saliva, Cell Culture
Aspartate Assay	BA0078		Serum, Plasma, Tissue, Culture Media
Aspartate Transaminase Activity Assay	BA0079		Serum, Plasma
BCG Albumin Assay	BA0030	BA0030	Serum, Plasma, Urine, Biological Preparations
Beta-Glucosidase Activity Assay	BA0018		Biological
Bile Acid Assay	BA0099		Serum, Plasma, Urine, Biological Preparations
Bilirubin Assay	BA0031		Serum
Chloride Assay	BA0033	BA0033	Biological, Food, Environmental
Cholesterol Assay (ECCH-100)	BA0084		Serum, Plasma
Cholesterol Uptake Assay	BA0021		Adherent Cells
Choline Assay	BA0088		Serum, Plasma, Urine, Saliva, Milk, Cells
Citrate Assay	BA0090		Serum, Plasma, Agricultural
Creatine Assay	BA0095		Serum, Plasma, Urine, Saliva
Creatine Kinase Activity Assay		MAES0189	Serum, Plasma, Animal Tissue, Cells
Creatinine Assay		BA0034	Urine, Serum, Plasma
D-Lactate Assay	BA0097		Serum, Plasma, Cell Culture Media
Ethanol Test	BA0039	BA0039	Alcoholic Beverages etc.
Formaldehyde Assay	BA0022		Biological, Food, Beverage, Environmental
Free Fatty Acid Measurement	BA0101		Serum, Plasma, Urine, Saliva, Cells
Fructose Assay	BA0109	MAES0108	Serum, Plasma, Urine, Saliva, Cells
Fumerate Assay	BA0110		Food and Other Biological Samples
Galactose Assay	BA0112		Serum, Plasma, Urine, Cell Culture Medium
Glucose Assay	BA0041	BA0041	Biological, Food and Beverage
Glucose Dehydrogenase Assay	BA0024		Serum, Plasma, Cell, Tissue, Agricultural
Glucose-6-Phosphate Assay	BA0111		Serum, Plasma, Cell, Tissue, Agricultural
G6PD Assay	BA0027		Serum, Plasma, Cell, Tissue, Agricultural
Glutamate Dehydrogenase Activity Assay	BA0025		Serum, Plasma, Cell, Tissue, Agricultural
Glutamine Assay	BA0113		Serum, Plasma, Urine, Cells, Tissue
Glutathione Assay	BA0042	BA0042	Whole Blood, Plasma, Serum, Cells
Glycerol Assay	BA0115		Biological, Food, Beverage

Clinical Chemistry Assays

Clinical Chemistry Assays			
Product Name	Microplate Reader	Spectrophotometer	Sample Type
Glycogen Assay	BA0065	MAES0075	Animal Liver, Muscle
HDL and LDL/VLDL Assay	BA0066		Serum
Heme Assay	BA0044	BA0044	Blood, Serum, Plasma, Urine
Hemoglobin Assay	BA0043	BA0043	Blood, Serum, Plasma, Urine
Indican Assay		BA0036	Urine
Lactate Dehydrogenase Activity Assay	MAES0195		Serum, Plasma, Animal Tissue, Hydrothorax
Lactose Assay	BA0126		Biological, Food, Agricultural
LDH Activity Assay	MAES0058		Serum, Plasma, Hydrothorax, Tissue, Cells
Liquid Zinc Assay	BA0051	BA0051	Serum, Plasma, Urine, Saliva
Magnesium Assay	MAES0122		Serum, Plasma
Malachite Green Phosphate Assay	BA0048	BA0048	Serum, Urine, Saliva, Tissue Culture
Malate Assay	BA0129		Malate in food and agricultural products
NADP/NADPH Assay	BA0107		Cells, Tissue
NADP+/NADPH Assay	BA0200		Cells, Tissue
Oxalate (Oxalic Acid) Assay	BA0141		Urine, Tissue Samples
Oxaloacetate Assay	BA0139		Plasma, Serum, Tissue, Culture Media
Phenylalanine Assay	BA0142		Serum, Urine
Phosphate Assay	BA0165	BA0165	Enzyme reactions with free phosphate releases
Phospholipase D Activity Assay	BA0144		Biological
Protein Creatinine Ratio Assay	BA0055		Urine samples
Pyruvate Assay	BA0146		Biological
Sialic Acid 1-Step Assay	BA0148		Biological
Succinate Assay	BA0149		Food, Beverage, Agricultural
Sucrose Assay	MAES0013	MAES0121	Plant Tissue
Sulfate Assay	BA0057	BA0057	Serum, Urine, Food, Environmental
Total Amino Acid Assay	MAES0063		Serum, Plasma, Urine, Tissue
Total Bile Acid Assay	MAES0134	MAES0134	Serum
Total Bilirubin Assay	MAES0193		Animal Serum
Total Protein Assay	BA0179		Urine, Cerebrospinal Fluid etc.
Triglyceride Assay	MAES0160		Serum, Plasma, Cells, Culture Supernatant
Tryptophan Assay	BA0153		Serum
Urea (BUN) Assay	MAES0178		Serum, Plasma, Saliva, Urine
Urea (BUN) Quick Test Strips	BA0203		Serum, Plasma, Urine
Urea Assay	BA0190		Urea in Biological Samples
Uric Acid Assay	BA0049	BA0049	Serum, Plasma, Urine, Biological Samples
Whole Blood Hemoglobin Assay	BA0062	BA0062	Whole Blood Samples
Xanthine Assay	BA0154		Cell Lysate, Serum, Biological Samples
Zinc Assay	MAES0111		Serum, Plasma, Urine, Milk

Cations and Inorganic Ion Assays

Cations are positively charged inorganic ions prevalent in the cytoplasm and body fluids of organisms, participating in numerous biochemical functions. These ions can be quantified using assays that assess their charge density or electrophoretic mobility. Precise measurements of cation concentrations are imperative since imbalances can lead to diseases. They are not only vital for life but also require vigilant monitoring. Assay Genie offers a comprehensive range of clinical chemistry assays to analyse key steps in metabolic and regulatory pathways.

Product Name	Microplate Reader	Spectrophotometer	Sample Type
Acetate Assay	BA0140		Serum, Plasma, Food, Agricultural
Calcium Assay	MAES0091	BA0032	Biological, Food, Environmental
Chloride Assay	MAES0139	BA0033	Biological, Food, Environmental
Chromium Release Assay	BA0019		Biological, Food, Environmental
Citrate Assay	BA0090	BA0090	Serum, Plasma, Agricultural
Copper Assay	MAES0175	BA0035	Biological, Food, Environmental
Ferrous Ion Assay	MAES0206	MAES0176	Serum, Tissue, Cells
Formate Assay	BA0108		Urine, Serum
Glutamate Assay	BA0114		Serum, Plasma, Urine, Cell, Tissue
Iron Assay	MAES0113	BA0040	Serum, Tissue
Liquid Zinc Assay		BA0051	Serum, Plasma, Urine
Magnesium Assay	MAES0122	BA0045	Serum, Plasma, Biological Samples
Oxalate Assay	BA0141		Urine, Tissue
Phosphate Assay	BA0165		Enzyme reactions with free phosphate releases
Phosphorus Assay	MAES0161	MAES0162	Serum, Plasma, Tissue
Potassium turbidimetric Assay	MAES0170		Serum, Plasma, Cell Culture Supernatant
Sodium Assay	MAES0145	MAES0145	Serum
Sulfate Assay	BA0057		Serum, Urine, Food, Environmental
TIBC Assay	MAES0073		Serum
Total Iron Assay	MAES0205		Serum, Tissue, Cells
Total Iron Binding Capacity Assay		MAES0074	Serum
Zinc Assay	MAES0111		Serum, Plasma, Urine, Milk

Food Analysis Assays

Food components determine nutritional and safety profiles. Through food analysis assays, these elements are precisely quantified, ensuring quality and regulatory compliance. Accurate detection is essential for health and informed consumer choices. Assay Genie provides a comprehensive suite of assays for in-depth food component analysis.

Product Name	Microplate Reader	Sample Type
Acetaldehyde Assay	BA0185	Serum, Plasma, Food, Agricultural
Acetate Assay	BA0140	Serum, Plasma, Food, Agricultural
Alpha-Amylase and Beta-amylase Activity Assay	MAES0019	Serum, Plasma, Saliva, Tissue
Alpha-Amylase Assay	BA0082	Blood, Saliva, Urine, Agricultural
Ammonia Assay	BA0054	Biological, Environmental
Ascorbic Acid Assay	BA0077	Serum, Plasma, Urine, Saliva, Tissue
Calcium Assay	BA0032	Biological, Food, Environment
Chloride Assay	BA0033	Biological, Food, Environment
Cholesterol Assay	BA0084	Serum, Plasma
Choline Assay	BA0088	Serum, Plasma, Urine, Cells
Copper Assay	BA0035	Food, Biological, Environmental
Creatine Assay	BA0095	Serum, Plasma, Urine, Saliva
D- Mannitol Assay	BA0133	Biological, Food, Beverage, Agricultural
Diamine Oxidase Assay	BA0172	Serum, Plasma
D-Lactate Assay	BA0097	Serum, Plasma, Cell Culture Media
D-Lactic Acid/Lactate Assay	MAES0015	Serum, Plasma, Animal Tissue
D-Sorbitol Assay	BA0147	Serum, Food, Agricultural
Ethanol Test Kit	BA0039	Alcoholic beverages
Ferrous Iron Assay	MAES0206	Serum, Tissue, Cells
Free Cholesterol Assay	MAES0017	Serum, Plasma, Tissue
Free Fatty Acid Assay	BA0101	Serum, Plasma, Urine, Food, Environmental
Fructose Assay	BA0109	Serum, Plasma, Urine, Food, Environmental
Galactose Assay	BA0112	Serum, Plasma, Urine, Food, Environmental
Glucose Assay	BA0041	Biological, Food and Beverage
Glutamate Assay	BA0114	Serum, Plasma, Urine, Cells, Tissue
Glutamate Dehydrogenase Activity Assay	BA0025	Serum, Plasma, Cells, Tissue, Agricultural
Glutamic Acid Assay	MAES0098	Serum, Plasma, Cell Culture Supernatant
Glycerol Assay	BA0115	Biological, Food, Beverage
Glycogen Assay	BA0065	Animal Liver and Muscle tissue
HDL-Cholesterol Assay	MAES0148	Serum, Plasma, Cell Culture Supernatant

Food Analysis Assays

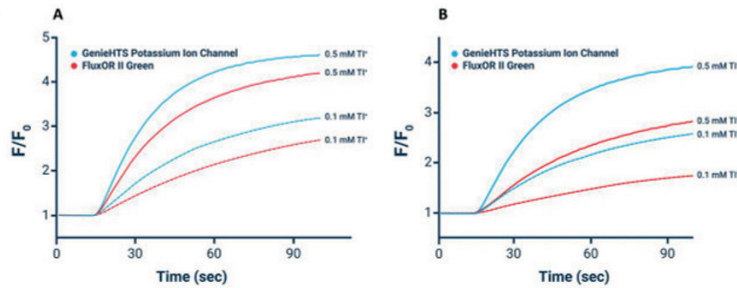
Food Analysis Assays			
Product Name	Microplate Reader	Spectrophotometer	Sample Type
Histamine Assay	BA0120		Food, Beverage, Agricultural Products
Hydroxyproline Assay		MAES0067	Serum, Tissue, Cells, Culture Supernatant
Iron Assay	BA0040		Biological and Environmental Samples
Isocitrate Assay	BA0089		Food, Beverage, Biological
L- Lactate Assay	BA0091		Serum, Plasma, Cell Culture Media
Lactose Assay	BA0126		Biological (milk), Food, Agricultural
Lactulose Assay	BA0128		Food, Agricultural, Biological
LDL Cholesterol Assay	MAES0143	MAES0144	Serum, Plasma, Cell Culture Supernatant
Liquid Zinc Assay	BA0051		Serum, Plasma, Urine, Food, Environmental
L-Lactic Acid/Lactate Assay	MAES0056	MAES0057	Serum, Plasma, Cell Culture Supernatant
Magnesium Assay	BA0045		Biological, Food and Beverage
Malate Assay	BA0129		Malate in food and agricultural products
Maltose Assay	BA0132		Biological Samples
Nitric Oxide Assay	BA0007		Plasma, Serum, Urine, Tissue, Cells, Food
Non-esterified Free Fatty Acids Assay	MAES0027	MAES0028	Serum, Animal Tissue, Cells
Oxalate (Oxalic Acid) Assay	MAES0204		Animal Urine, Serum, Plasma, Plant Tissue
Oxaloacetate Assay	BA0139		Plasma, Serum, Tissue, Culture Media
Phenylalanine Assay	BA0142		Serum, Urine
Phosphate Assay	BA0165		Enzyme reactions with free phosphate releases
Phospholipid Assay	BA0143		Biological
Pyruvate Assay	BA0146		Biological
Pyruvate Quick Test Strips	BA0202		Wine, Beer, Biological Samples
Sialic Acid 1-Step Assay	BA0148		Biological
Sialic Acid Assay	BA0058		Serum, Plasma, Saliva, Milk
Starch Assay	BA0068		Biological, Agriculture, Food
Succinate Assay	BA0149		Food, Beverage, Agricultural, Biological
Sucrose Assay	BA0151		Serum, Plasma, Urine, Agricultural
Sulfate Assay	BA0057		Serum, Urine, Food And Environment
Total Amino Acids Assay	MAES0063		Serum, Plasma, Urine, Tissue
Total Cholesterol Assay		MAES0094	Serum, Plasma, Cell Culture Supernatant
Total Iron Assay	MAES0205		Serum, Tissue, Cells
Triglyceride Assay	BA0152		Serum, Plasma
Tryptophan Assay	BA0153		Serum
Urea (BUN) Assay	MAES0136	MAES0178	Serum, Plasma, Saliva, Urine
Urea Assay	BA0050	BA0050	Serum, Plasma, Urine, Food, Environmental
Xanthine Assay	BA0154		Cell Lysate, Serum, Biological Samples
Zinc Assay	MAES0111		Serum, Plasma, Urine, Milk

High-Throughput Screening (HTS) Assays are a powerful tool for drug discovery. They can help identify potential new drugs and therapeutic targets. By testing a large library of samples simultaneously, HTS can be used to screen for a variety of different compounds, including small molecules, peptide and antibodies. The Assay Genie HTS assays can be conducted in 96-well or 384-well plates which allows for a large number of samples to be tested at once. HTS assays can be readily automated on HTS liquid handling systems, which means they can be run quickly with minimal human input.

GenieHTS Potassium Ion Channel Assay

High-throughput, no wash thallium (Tl⁺) assay.

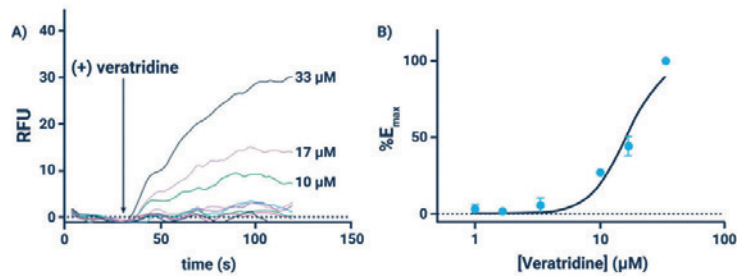
An optimal solution for measuring flux through potassium (K⁺), sodium (Na⁺), and non-selective cation channels and their effectors including transporters and GPCRs.



GenieHTS Calcium Flux Assay Kit

High-throughput, no wash calcium (Ca²⁺) assay.

An optimal solution for measuring intracellular Ca²⁺ dynamics, including effectors such as GPCRs and protein transporters.



HTS Assays

Product Name	Microplate Reader	Spectrophotometer	Luminometer	Sample Type
Acetylcholinesterase Inhibition Assay	BA0160	BA0160		Acetylcholinesterase
Adipolysis Assay	BA0076	BA0076		Cell Culture Media
Arginase Inhibitor Screening		BA0193		Arginase
ATPase/GTPase Assay		BA0017		ATPase and GTPase
Cell Viability Assay	BA0002	BA0002		Cell Culture

GPCR & HTS Assays

HTS Assays				
Product Name	Microplate Reader	Spectrophotometer	Luminometer	Sample Type
Collagen Assay	BA0186	BA0186		Biological Samples and Cosmetic Samples
Duo-Glow Luciferase Assay			BA0180	Cells
Fatty Acid Uptake Assay	BA0184	BA0184		Adipocytes, Fatty Acid Transporting Cells
G-6-P Dehydrogenase Assay		BA0027		Plasma, Serum, Tissue, Culture Media
Glycolysis Assay		BA0086		Cell Media
Indole Assay		BA0046		Bacterial Growth Medium
Kinase Assay	BA0125	BA0125		All Kinases
LDH Cytotoxicity Assay		BA0001		Cell Culture
Luciferase Reporter Gene Assay			BA0181	Cells
Monoamine Oxidase Inhibitor Screening	BA0188	BA0188		Monoamine Oxidase
MTT Cell Viability Assay		BA0004		Cell Culture
Neuraminidase Activity Assay	BA0135	BA0135		Biological Samples
NOS Inhibitor Screening		BA0189		Nitric Oxide Synthase
Phosphate Assay	BA0165	BA0165		Enzyme reactions with free phosphate releases

GPCR Ion Channel Assays		
Product Name	Microplate Reader	Fluorescence
GenieHTS Calcium Flux Assay	ASIB001	490 nm
GenieHTS Sodium Flux Assay	ASIB005	545 nm
GenieHTS Potassium Ion Channel Assay	ASIB003	490 nm
GenieHTS Calcium Flux Ratiometric Assay	ASIB010	505 nm

Amino Acids & Related Assays

Amino acids, the foundational units of proteins, underpin cellular structure and function. Their sequences are orchestrated by the nucleotide composition of corresponding genes. Amino acid assays allow meticulous quantification, offering insights into protein synthesis, metabolism, and cellular dynamics.

Product Name	Microplate Reader	Spectrophotometer	Sample Type
ALB Assay Kit	MAES0065	MAES0066	Serum, Plasma
Alanine Transaminase Assay Kit	BA0074	BA0074	Serum, Plasma
Aspartate Assay Kit	BA0078		Serum, Plasma, Tissue, Culture Media
Aspartate Transaminase Activity Assay Kit	BA0078		Serum, Plasma, etc.
BCA Protein Assay Kit	MAES0177		Serum, Plasma, Cell Culture supernatant
BCG Albumin Assay Kit		BA0029	Serum, Plasma, Urine, Biological Preparations
BCP Albumin Assay Kit		BA0030	Serum, Plasma, Urine, Biological Preparations
Biuret Protein Assay	MEAS0124	MEAS0125	Serum, Plasma, Tissue
Blood Ammonia Assay	MAES0116	MAES0117	Serum, Plasma
Bradford Protein Assay Kit	MAES0126	BA0168	Biological Food, Agriculture etc
Cysteine (Cys) Assay Kit	MAES0181		Serum, Plasma, Animal Tissue, Cells
Gamma-Aminobutyric Acid Assay Kit	MAES0103		Serum, Plasma, Tissue, Cells
Glutamate Assay Kit		BA0114	Serum, Plasma, Urine, Cell, Tissue, etc.
Glutamic Acid Assay	MAES0098	MAES0099	Serum, Tissue, Cell Culture Supernatant
Glutamine Assay Kit	BA0113		Serum, Plasma, Urine, Cells, Tissues
Homocysteine Assay Kit		MAES0115	Serum
Hydroxyproline Assay Kit		MAES0068	Serum, Tissue, Cell Culture supernatant
L-Alanine Assay Kit	BA0073	BA0073	Plasma, Serum, Urine, Tissue
Phenylalanine Assay Kit	BA0142	BA0142	Serum, Urine
Proline Assay Kit		MAES0133	Plant Tissue, Honey
Pyruvate Assay Kit	BA0146	BA0146	Biological Samples
Pyruvic Acid Assay	MAES0105	MAES0104	Serum, Plasma, Tissue, Cells
Total Amino Acids Assay Kit	MAES0063		Serum, Plasma, Urine, Tissue
Total Carbonyl Assay Kit	MAES0128	MAES0129	Serum, Plasma, Tissue
Total Protein Assay Kit		BA0174	Biological Samples
Tryptophan Assay Kit	BA0153	BA0153	Serum, Urine
Leucine Aminopeptidase Activity Assay	MAES0190		Serum, Urine
Phenylalanine Assay Kit	BA0142		Serum, Urine

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