


A Perfect Standard Curve for Cell Metabolism, A Stable and Reliable Beacon!

High Sensitivity & Stable and Convenient Cell Metabolism Detection Application Tools

Biochemical detection refers to the use of biological or chemical methods to test samples. The targets measured are usually biochemical substance such as enzymes, sugars, lipids, proteins and non-protein nitrogen, inorganic elements or organism functional targets. In scientific research, biochemical detection provides convenient methods for substance content determination, enzyme activity measurement, and drug development. Abbkine's CheKine™ cell metabolism kits cover multiple series of indicators, with high sensitivity, easy operation, and stable performance, bringing you a time-saving and efficient experience!



NAD is a coenzyme present in all cells, including NAD (oxidized form) and NADH (reduced form). The importance of NAD⁺ in regulating cellular redox state, as well as its role in regulating signaling pathways and transcription, has made NAD⁺ and its enzymes involved in synthesis and consumption potential drug targets for various diseases. Abbkine's CheKine™ Micro Coenzyme I NAD(H) Assay Kit provides a highly sensitive method to quickly and conveniently detect the content of NAD and NADH in tissue and cell samples.

 Cat No. KTB1020 | Size: 48 T/96 T

■ Oxidation and Antioxidant
/Coenzyme/Glutathione

■ Oxidative Phosphorylation/
Tricarboxylic Acid Cycle/
Fatty Acid Metabolism

■ Sugar Metabolism/Glycolysis/
Amino Acid Metabolism

CheKine™ Cell Metabolism Kit Product Features and Advantages

Abbkine's CheKine™ cell metabolomics kits cover multiple series of targets and has a wide range of applications, including oxidation and antioxidation series, coenzyme series, glutathione series, oxidative phosphorylation series, citric acid cycle series, fatty acid metabolism series, glycolysis series, gluconeogenesis series, amino acid metabolism series, etc. The detection samples involve animal and plant tissues, serum, plasma, cells, bacteria, and various body fluids, with a rich variety of detection types. Abbkine provides you with practical kit series products, comprehensive services, and affordable prices to assist your cell metabolism experiments!

- ✓ High sensitivity, the method is based on optimized colorimetry, higher sensitivity, no radioactivity, safe and stable;
- ✓ Suitable for a variety of samples, including animal and plant tissues, cells, bacteria, fungi, serum, plasma;
- ✓ The experimental procedure is easy and convenient, providing detailed and optimized experimental steps and methods for calculating results;
- ✓ The experimental results are accurate and reliable, providing standard and standard curves for reference.

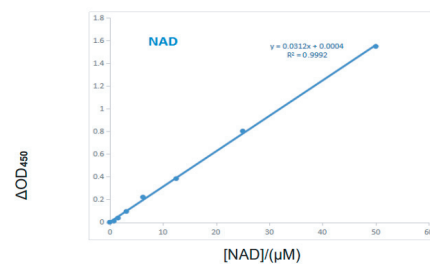


Fig. Standard Curve of NAD in 96-well plate assay after using KTB1020. The y-axis is ΔOD and the x-axis is NAD concentration (μM).

Oxidation and Antioxidant Series

Oxidation is a common chemical reaction in our daily life. During the process of oxidation, free radicals are produced that can cause damage to our cells, the human body possesses its own antioxidant molecules that are synthesized naturally, as well as those are supplied through food. Both enzymatic and non-enzymatic antioxidant molecules play a crucial role in protecting against the peroxidation damage caused by exercise.

Product Name	Cat No.	Size
CheKine™ Micro Superoxide Dismutases (SOD) Activity Assay Kit	KTB1030	48 T/96 T
CheKine™ Micro Catalase (CAT) Activity Assay Kit	KTB1040	96 T/480 T
CheKine™ Micro Hydrogen Peroxide (H ₂ O ₂) Assay Kit	KTB1041	96 T/480 T
CheKine™ Micro Lipid Peroxidation (MDA) Assay kit	KTB1050	48 T/96 T
CheKine™ Micro Advanced Oxidation Protein Products (AOPP) Assay Kit	KTB1060	100 T
CheKine™ Micro Xanthine Oxidase Activity Assay Kit	KTB1070	48 T/96 T
CheKine™ Micro Superoxide anion Scavenging Capacity Assay Kit	KTB1080	48 T/96 T
CheKine™ Micro Hydroxyl Free Radical Scavenging Capacity Assay Kit	KTB1091	48 T/96 T
CheKine™ Micro Polyphenol Oxidase (PPO) Activity Assay Kit	KTB1140	48 T/96 T
CheKine™ Micro Peroxidase (POD) Activity Assay Kit	KTB1150	48 T/96 T
CheKine™ Micro Phenylalanine Ammonia Lyase (PAL) Activity Assay Kit	KTB1160	48 T/96 T

Product Name	Cat No.	Size
CheKine™ Micro Protein Carbonyl Assay Kit	KTB1200	48 T/96 T
CheKine™ Micro Superoxide Anion Assay Kit	KTB1210	48 T/96 T
CheKine™ Micro Diamine Oxidase (DAO) Activity Assay Kit	KTB1220	48 T/96 T
CheKine™ Micro Nitric Oxide (NO) Assay Kit	KTB1400	48 T/96 T
CheKine™ Micro Total Antioxidant Capacity (TAC) Assay Kit	KTB1500	96 T/480 T
CheKine™ Oxygen Radical Antioxidant Capacity (ORAC) Fluorometric Assay Kit	KTB1501	48 T/96 T
CheKine™ Hydroxyl Radical Antioxidant Capacity (HORAC) Fluorometric Assay Kit	KTB1502	48 T/96 T
CheKine™ Micro Plant Oligomeric Proantho Cyanidins (OPC) Assay Kit	KTB1520	48 T/96 T
CheKine™ Micro Plant Flavonoids Assay Kit	KTB1530	48 T/96 T
CheKine™ Micro Plant Total Phenols (TP) Assay Kit	KTB1540	48 T/96 T
CheKine™ Micro Tannin Assay Kit	KTB1541	48 T/96 T
CheKine™ Micro Tannase(TAN) Activity Assay Kit	KTB1542	48 T/96 T
CheKine™ Micro Ceruloplasmin Activity Assay Kit	KTB1550	96 T
CheKine™ Micro Monoamine Oxidase (MAO) Activity Assay Kit	KTB1900	48 T/96 T
CheKine™ Reactive Oxygen Species (ROS) Detection Fluorometric Assay Kit	KTB1910	50 T/100 T
CheKine™ Micro Anthocyanidin Reductase(ANR) Activity Assay Kit	KTB3010	48 T/96 T
CheKine™ Micro Water and Soil Nitrite Content Assay Kit	KTB3050	96 T
CheKine™ Micro Food Nitrite Assay Kit	KTB3051	96 T
CheKine™ Micro Sorbitol Dehydrogenase Assay Kit	KTB3060	48 T/96 T

Coenzyme Series

Coenzymes are a broad class of organic cofactors that are essential for enzyme-catalyzed oxidation-reduction, group transfer, and isomerization reactions. Coenzymes can transfer chemical groups from one enzyme to another, and loosely bind to enzymes, playing a necessary role in the activity of specific enzymes. Many vitamins and their derivatives, such as thiamine and folic acid, are classified as coenzymes.

Product Name	Cat No.	Size
CheKine™ Micro Coenzyme II NADP(H) Assay Kit	KTB1010	48 T/96 T
CheKine™ Micro Glucose-6-Phosphate Dehydrogenase (G6PDH) Activity Assay Kit	KTB1011	48 T/96 T
CheKine™ Micro Creatine Kinase (CK) Activity Assay Kit	KTB1012	48 T/96 T
CheKine™ Micro 6-Phosphogluconate Dehydrogenase Activity Assay Kit	KTB1013	48 T/96 T
CheKine™ Micro Coenzyme I NAD(H) Assay Kit	KTB1020	48 T/96 T
CheKine™ Micro NADH Oxidase (NOX) Assay Kit	KTB1021	48 T/96 T
CheKine™ Micro NAD+ kinase (NADK) Activity Assay Kit	KTB1022	48 T/96 T

Glutathione Series

Glutathione (GSH) is a tripeptide composed of glutamic acid, cysteine, and glycine, the structure of GSH contains a reactive sulfhydryl group (-SH) that is easily oxidized and dehydrogenated, this unique structure makes it the main antioxidant in the body. GSH also serves as a coenzyme for many enzymes, such as GSH-Px, and is involved in various biological processes, participating in scavenging ROS and protecting the body from oxidative stress. The levels of GSH in the body can reflect to some extent the body's antioxidant capacity.



Cat No.	Cat No.	Size
CheKine™ Micro Reduced Glutathione (GSH) Assay Kit	KTB1600	48 T/96 T
CheKine™ Micro Glutathione Oxidized (GSSG) Assay Kit	KTB1610	96 T
CheKine™ Micro Glutathione Reductases (GR) Activity Assay Kit	KTB1620	96 T/96 T*5
CheKine™ Micro Glutathione S-Transferase (GST) Assay Kit	KTB1630	48 T/96 T
CheKine™ Micro Glutathione Peroxidase (GSH-Px) Activity Assay Kit	KTB1640	48 T/96 T
CheKine™ Micro Thioredoxin Reductase (TrxR) Assay Kit	KTB1650	48 T/96 T
CheKine™ Micro Thioredoxin Peroxidase (TPX) Assay Kit	KTB1660	48 T/96 T
CheKine™ Micro Total Glutathione (T-GSH) Assay Kit	KTB1670	48 T/96 T
CheKine™ Micro γ -Glutamyl Cysteine Ligase (GCL) Activity Assay Kit	KTB1680	48 T/96 T
CheKine™ Micro Gamma-Glutamyl Transpeptidase (GGT) Activity Assay Kit	KTB1690	96 T

Oxidative Phosphorylation

Oxidative phosphorylation is the coupled reaction in which energy released during the oxidation of substances in the body is supplied through the respiratory chain to synthesize ATP by combining ADP with inorganic phosphate. This process refers to the oxidation steps that occur during the breakdown of organic substances, including sugar, fat, and amino acid, releasing energy that drives the synthesis of ATP.

Product Name	Cat No.	Size
CheKine™ Micro Na ⁺ /K ⁺ -ATPase Activity Assay Kit	KTB1800	48 T/96 T
CheKine™ Micro Ca ²⁺ /Mg ²⁺ -ATPase Activity Assay Kit	KTB1810	48 T/96 T
CheKine™ Micro Mitochondrial complex I Activity Assay Kit	KTB1850	48 T/96 T
CheKine™ Micro Mitochondrial complex II Activity Assay Kit	KTB1860	48 T/96 T
CheKine™ Micro Mitochondrial complex III Activity Assay Kit	KTB1870	48 T/96 T
CheKine™ Micro Mitochondrial complex IV Activity Assay Kit	KTB1880	48 T/96 T
CheKine™ Micro Mitochondrial complex V Activity Assay Kit	KTB1890	48 T/96 T

Tricarboxylic Acid Cycle

The tricarboxylic acid cycle is a cyclic reaction system composed of a series of enzyme-catalyzed reactions, in this process, acetyl-CoA (C2) reacts with oxaloacetate (OAA) (C4) to generate citric acid (C6) containing 3 carboxyl groups, through 4 dehydrogenations (three NADH + H⁺ and one FADH₂), 1 substrate-level phosphorylation, the cycle generates 2 molecules of CO₂ and regenerates oxaloacetate, completing the cycle.

Product Name	Cat No.	Size
CheKine™ Micro Lactate Assay Kit	KTB1100	48 T/96 T/480 T
CheKine™ Micro Lactate Dehydrogenase (LDH) Assay Kit	KTB1110	96 T/480 T
CheKine™ Micro α -Ketoglutarate Dehydrogenase (α -KGDH) Assay Kit	KTB1240	48 T/96 T
CheKine™ Micro Mitochondrial Isocitrate Dehydrogenase (ICDHm) Activity Assay Kit	KTB1250	48 T/96 T
CheKine™ Micro Acetyl Coenzyme A (Acetyl-CoA) Assay Kit	KTB1260	48 T/96 T
CheKine™ Micro Pyruvate Dehydrogenase (PDH) Activity Assay Kit	KTB1270	48 T/96 T
CheKine™ Micro Mitochondrial Malate Dehydrogenase (mMDH) Activity Assay Kit	KTB1280	48 T/96 T
CheKine™ Micro Aconitase (ACO) Activity Assay Kit	KTB1290	48 T/96 T

Fatty Acid Metabolic Series

Fatty acid metabolism consists of various metabolic processes involving fatty acid or closely related molecules. Fatty acid belongs to the class of constant nutrients in lipid molecules. These processes can be mainly divided into (1) catabolic processes that produce energy and (2) anabolic processes that synthesize fatty acids.

Product Name	Cat No.	Size
CheKine™ Micro Triglyceride (TG) Assay Kit	KTB2200	48 T/96 T
CheKine™ Micro Free Cholesterol (FC) Assay Kit	KTB2210	48 T/96 T
CheKine™ Micro Total Cholesterol (TC) Assay Kit	KTB2220	48 T/96 T
CheKine™ Micro Free Fat Acid (FFA) Assay Kit	KTB2230	48 T/96 T
CheKine™ Micro Fatty Acid Synthetase(FAS) Activity Assay Kit	KTB2240	48 T/96 T
CheKine™ Micro High Density Lipoprotein Cholesterol (HDL-C) Assay Kit	KTB2250	48 T/96 T
CheKine™ Micro Low Density Lipoprotein Cholesterol (LDL-C) Assay Kit	KTB2260	48 T/96 T
CheKine™ Micro Alcohol Acyltransferase (AAT) Activity Assay Kit	KTB1560	48 T/96 T

Carbohydrate Metabolism

Carbohydrates are a class of organic compounds that are chemically composed of multiple hydroxyl aldehyde or hydroxyl ketone derivatives, carbohydrate metabolism refers to a series of complex chemical reactions in the body involving glucose, glycogen, and other carbohydrates. In the human body, the main forms of carbohydrates are glucose and glycogen. Carbohydrate metabolism can be divided into catabolic and anabolic processes, and the basic processes of carbohydrate metabolism in organisms are generally similar.

Product Name	Cat No.	Size
CheKine™ Micro Glucose Assay Kit	KTB1300	96 T/192 T
CheKine™ Micro Glucose Oxidase Activity (GOD) Assay Kit	KTB1310	96 T/480 T
CheKine™ Micro Plant Soluble Sugar Assay Kit	KTB1320	96 T
CheKine™ Micro Blood Glucose Assay Kit	KTB1330	48 T/96 T
CheKine™ Micro Glycogen Assay Kit	KTB1340	96 T
CheKine™ Micro Total Carbohydrate Assay Kit	KTB1350	48 T/96 T
CheKine™ Micro Reducing Sugar(RS) Assay Kit	KTB1360	48 T/96 T
CheKine™ Micro α -Amylase Activity Assay Kit	KTB1370	96 T
CheKine™ Micro β -Amylase Activity Assay Kit	KTB1380	48 T/96 T
CheKine™ Micro Starch Branching Enzyme(SBE) Activity Assay Kit	KTB1390	48 T/96 T

Glycolysis series

The glycolytic pathway, also known as the EMP pathway, refers to the process where cells break down glucose into pyruvate in the cytoplasm, resulting in the generation of little ATP. The glycolytic pathway can occur under both anaerobic and aerobic conditions, and is a co-metabolic pathway for the breakdown of glucose under the two conditions. Under anaerobic conditions, pyruvate is reduced to lactate, which is known as glycolysis.

Product Name	Cat No.	Size
CheKine™ Micro Pyruvate Kinase (PK) Assay Kit	KTB1120	48 T/96 T
CheKine™ Micro Pyruvate Acid (PA) Assay Kit	KTB1121	48 T/96 T
CheKine™ Micro Phosphoenolpyruvate Carboxylase (PEPC) Activity Assay Kit	KTB1122	48 T/96 T
CheKine™ Micro Hexokinase (HK) Activity Assay Kit	KTB1123	48 T/96 T
CheKine™ Micro 6-Phosphofructokinase(PFK) Activity Assay Kit	KTB1124	48 T/96 T
CheKine™ Micro Pyruvate Decarboxylase (PDC) Assay Kit	KTB1125	48 T/96 T

Amino Acid Metabolism Series

The metabolism of amino acids derived from protein hydrolysis in the body involves two aspects. 1. amino acids are mainly used to synthesize proteins, peptides and other nitrogen-containing substances specific to the organism. 2. they can be broken down into α -keto acids, amines and carbon dioxide by deamination, transamination or combined deamination or decarboxylation reactions.

Product Name	Cat No.	Size
CheKine™ Micro Alanine Aminotransferase (ALT/GPT) Activity Assay Kit	KTB1410	96 T
CheKine™ Micro Aspartate Aminotransferase (AST/GOT) Activity Assay Kit	KTB1420	96 T
CheKine™ Micro Proline (PRO) Assay Kit	KTB1430	48 T/96 T
CheKine™ Micro Glutamate (Glu) Assay Kit	KTB1440	48 T/96 T
CheKine™ Micro Cysteine (Cys) Assay Kit	KTB1450	48 T/96 T
CheKine™ Micro Amino Acid (AA) Assay Kit	KTB1460	96 T
CheKine™ Micro Lysine (LYS) Assay Kit	KTB3070	96 T
CheKine™ Micro Glutamate Synthase (GOGAT) Assay Kit	KTB3040	48 T/96 T
CheKine™ Micro Glutamic Acid Dehydrogenase (GDH) Assay Kit	KTB3041	48 T/96 T

Ion Metabolic Series

Product Name	Cat No.	Size
CheKine™ Micro Serum Potassium (K ⁺) Assay Kit	KTB2100	96 T
CheKine™ Micro Serum Sodium Assay Kit	KTB2130	96 T
CheKine™ Micro Serum Zinc Assay Kit	KTB2140	48 T/96 T
CheKine™ Micro Total Iron-Binding Capacity (TIBC) Assay Kit	KTB2150	96 T

Abbkine Scientific Ltd

As the world's unique cell and protein product portfolio supplier, we provide basic tools and solutions in the fields of protein extraction and purification, immunoassays, cell culture separation, and metabolic analysis. Abbkine is committed to customer's success and excellence.

The product listed herein is for research use only and is not intended for use in human or clinical diagnosis.

