

## ■ Cuproptosis

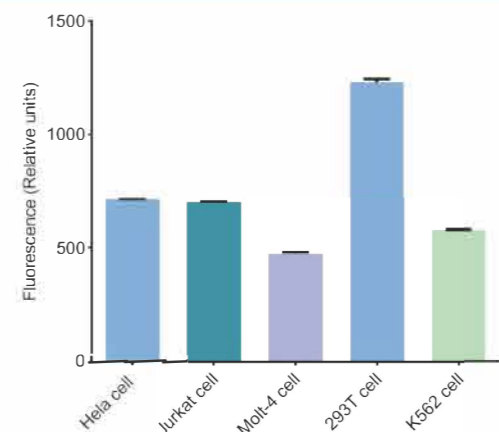
Cuproptosis, identified in March 2022, is a novel mechanism of regulated cell death. It is copper-dependent and occurs through copper binding to lipoylated components of the TCA cycle, leading to protein aggregation, iron-sulfur cluster protein loss, proteotoxic stress, and ultimately cell death.

Cat. No.	Product Name	Size
E-BC-F047	$\alpha$ -Ketoglutarate ( $\alpha$ -KG) Fluorometric Assay Kit	48 T/96 T
E-BC-K775-M	Cell Copper ( $\text{Cu}^{2+}$ ) Colorimetric Assay Kit (Complexing Method)	48 T/96 T
E-BC-F102	Cellular Cuprous Fluorometric Assay Kit	48 T/96 T
E-BC-K834-M	Cell Mitochondrial Complex I (NADH-CoQ Reductase) Activity Assay Kit	48 T/96 T
E-BC-K836-M	Cell Mitochondrial Complex III (Coenzyme Q-Cytochrome C Reductase) Activity Assay Kit	48 T/96 T
E-BC-K650-M	Pyruvate Dehydrogenase (PDH) Activity Assay Kit	96 T
E-BC-F058	Pyruvate Fluorometric Assay Kit	48 T/96 T

## Featured Products

### Cellular Cuprous Fluorometric Assay Kit (E-BC-F102)

- Reliable: Extensively validated with multiple cell types
- Efficient: Streamline your workflow with a 15-minute rapid detection process
- Accurate: Highly specific, with no interference from other ions



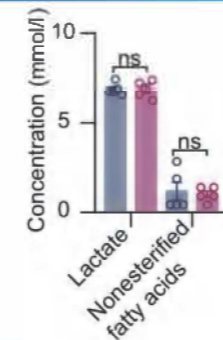
## ■ Inhibitor Screening

Enzymes are key targets in drug discovery. Elabscience has developed a range of advanced assay kits tailored for inhibitor screening, providing valuable tools to facilitate drug research and screening applications.

Cat. No.	Product Name	Size
E-BC-D011	3-Hydroxy-3-methylglutaryl-CoA Reductase (HMGR) Inhibitor Screening Kit	48 T/96 T
E-BC-D001	Angiotensin I Converting Enzyme 2 (ACE2) Inhibitor Screening Kit	96 T

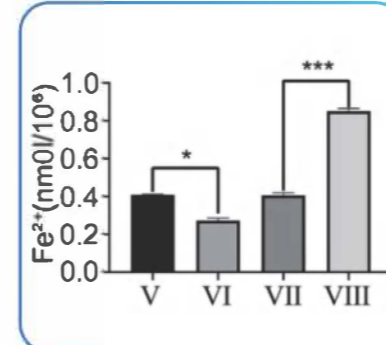
Cat. No.	Product Name	Size
E-BC-D007	Dipeptidyl Peptidase IV (DPP4) Inhibitor Screening Assay Kit	96 T
E-BC-D019	Xanthine Oxidase (XOD) Inhibitor Screening Kit	96 T

## Featured Publications



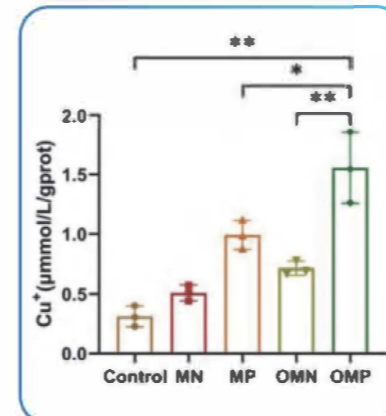
### Energy Metabolism Series

- Light modulates glucose metabolism by a retina-hypothalamus-brown adipose tissue axis. *Cell*, 2023.
- The lactate level in mouse serum was detected by **L-Lactic Acid (LA) Colorimetric Assay Kit (E-BC-K044-M)**



### Ferroptosis Series

- Exosome-mediated miR-144-3p Promotes Ferroptosis to Inhibit Osteosarcoma Proliferation, Migration, and Invasion through Regulating ZEB1. *Molecular Cancer*, 2023.
- The Fe<sup>2+</sup> level in H143B cells was detected by **Cell Ferrous Iron Colorimetric Assay Kit (E-BC-K881-M)**



### Cuproptosis Series

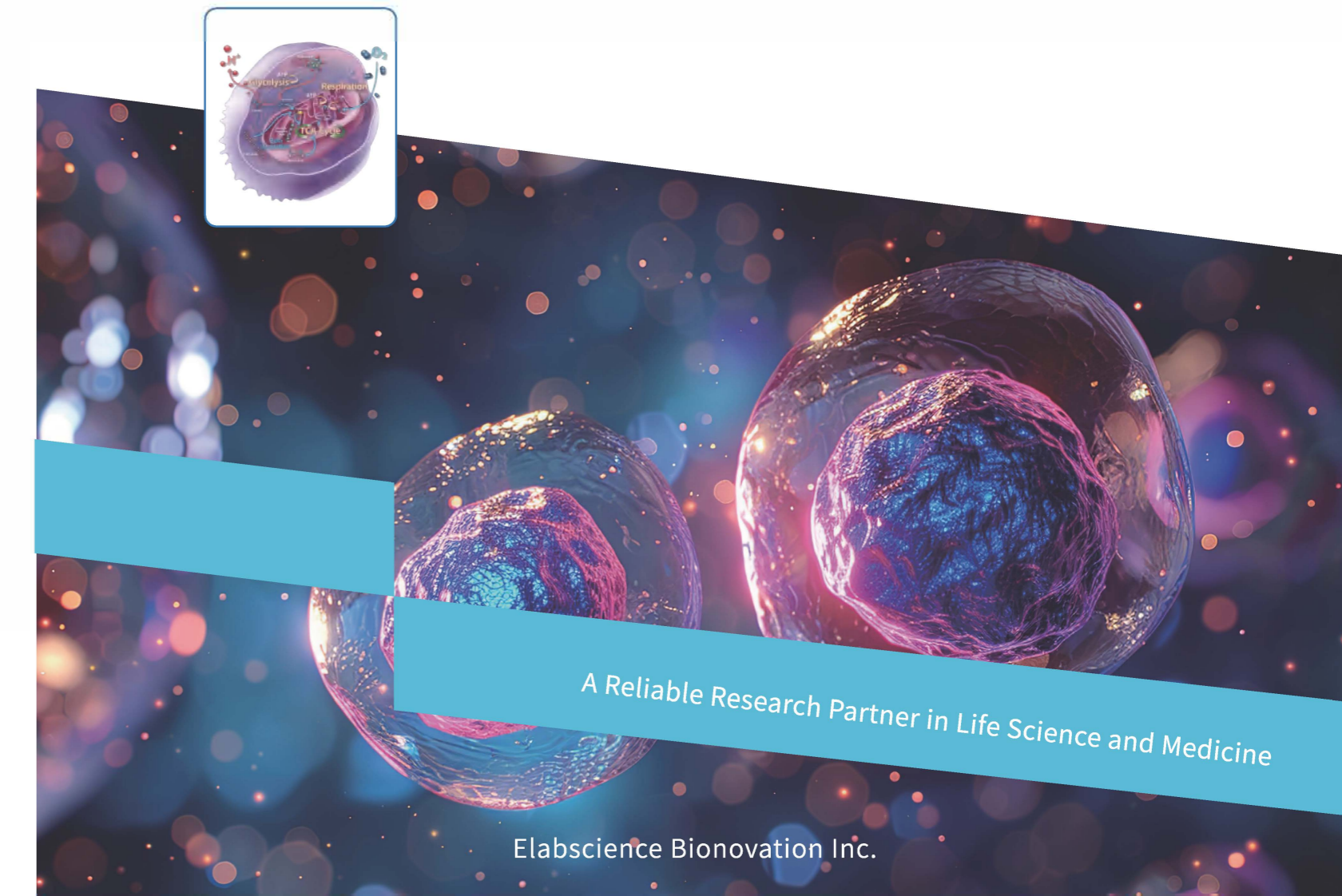
- Inhalable metal-organic framework-mediated cuproptosis combined with PD-L1 checkpoint blockade for lung metastasis synergistic immunotherapy. *Acta Pharmaceutica Sinica B*, 2024.
- The Cu<sup>2+</sup> level in B16-F10 cells was detected by **Cell Copper (Cu<sup>2+</sup>) Colorimetric Assay Kit (Complexing Method) (E-BC-K775-M)**



Elabscience®

# Metabolism Assay Kits

- ⌵ Ferroptosis
- ⌵ Energy Metabolism
- ⌵ Cuproptosis
- ⌵ Inhibitor Screening



A Reliable Research Partner in Life Science and Medicine

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Contact us:



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e-mail: info@bionova.es

www.bionova.es

Elabscience® has developed a series of featured products related to key metabolic indicators following the latest research trends. Our products cover cell death (ferroptosis, cuproptosis, disulfidptosis), mitochondrial function, and energy metabolism.

### Premium Products

#### 🔗 Ferroptosis Assay Kits

Complete indicators, providing holistic solutions for researchers

#### 📄 Fluorometric Assay Kits

Enhanced sensitivity, improved specificity, and reduced sample volume requirements

#### 📄 Energy Metabolism Assay Kits

Covers all metabolic pathways

#### 🔬 Cell Component Extraction

Metabolic detection simplified with no homogenization required and easy cell lysis

### Product Features

#### 📄 Applicable Sample Types

Serum, plasma, cultured cells, and tissue across multiple species

#### 📄 Technical Support

We offer comprehensive technical support and guidance for your research needs

#### 📄 External Validation

Utilized in studies published in renowned journals, including *Nature, Cell, and Advanced Materials*

## Research Field Specific



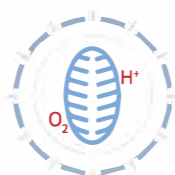
Ferroptosis



Cuproptosis



Disulfidptosis



Energy Metabolism



Oxidative Stress



Mitochondrion



Tricarboxylic Acid (TCA) Cycle



Glycolysis and Lipid Metabolism



Inorganic Ions



Plant Physiology



Amino Acids and Proteins



Liver and Renal



Metabolic Diseases

## Selected Product Lines

### Energy Metabolism

Energy metabolism is a fundamental cellular process involving key pathways such as glycolysis, lipid metabolism, the tricarboxylic acid (TCA) cycle, and oxidative phosphorylation. It serves as a critical indicator of cellular health and function.

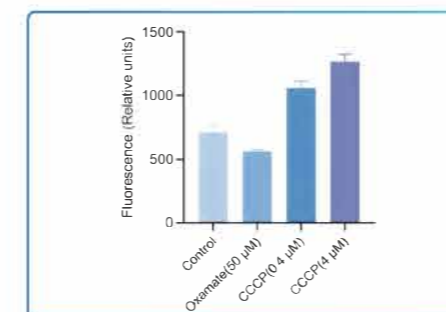
Cat. No.	Product Name	Size
E-BC-K652-M	Acetyl-CoA Colorimetric Assay Kit	48 T/96 T
E-BC-F009	Adenosine Diphosphate (ADP) Fluorometric Assay Kit	48 T/96 T
E-BC-F065	Adipogenesis Fluorometric Assay Kit	96 T
E-BC-F002	ATP Chemiluminescence Assay Kit	48 T/96 T
E-BC-F004	ATP/ADP Ratio Chemiluminescence Assay kit	48 T/96 T
E-BC-K178-M	Citrate Synthase (CS) Activity Assay Kit Extracellular Acidification Rate (ECAR)	48 T/96 T
E-BC-F069	Fluorometric Assay Kit	48 T/96 T
E-BC-F067	Fatty Acid Uptake Fluorometric Assay Kit	96 T
E-BC-F041	Glucose Uptake Fluorometric Assay Kit	96 T/500 Assays
E-BC-K044-M	L-Lactic Acid (LA) Colorimetric Assay Kit	48 T/96 T
E-BC-F068	Oxygen Consumption Rate (OCR) Fluorometric Assay Kit	48 T/96 T

### Ferroptosis

Ferroptosis is an iron-dependent form of regulated cell death driven by the accumulation of lipid peroxides and elevated intracellular ferrous iron levels. It results from an imbalance in the production and degradation of lipid reactive oxygen species, making it a critical area of research in oxidative stress and cell death mechanisms.

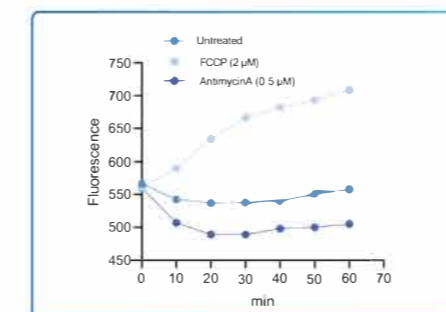
Cat. No.	Product Name	Size
E-BC-K881-M	Cell Ferrous Iron Colorimetric Assay Kit	48 T/ 96 T
E-BC-F101	Cell Ferrous Iron (Fe <sup>2+</sup> ) Fluorometric Assay Kit	96 T
E-BC-F066	Cystine Uptake Fluorometric Assay Kit	96 T
E-BC-F022	Ferroptosis Suppressor Protein-1 (FSP-1) Activity Fluorometric Assay Kit	96 T
E-BC-K883-M	Glutathione Peroxidase 4 (GPX4) Activity Assay Kit	48 T/96 T
E-BC-K771-M	Lactate Dehydrogenase (LDH) Cytotoxicity Colorimetric Assay Kit	96 T/ 500 Assays
E-BC-F003	Lipid Peroxide (LPO) Fluorometric Assay Kit	96 T
E-BC-K776-M	Selenium Colorimetric Assay Kit	48 T/ 96 T
E-BC-K794-M	Squalene Synthase (SQS) Activity Colorimetric Assay Kit	48 T/ 96 T

### Featured Products



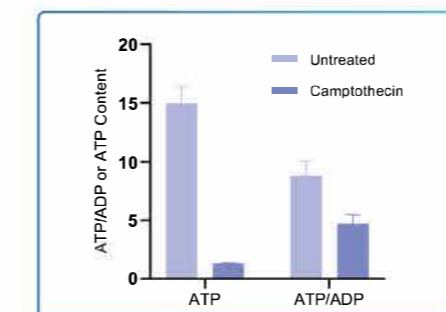
Extracellular Acidification Rate (ECAR) Fluorometric Assay Kit (E-BC-F069)

Fluorescence microplate reader compatibility for seamless detection



Oxygen Consumption Rate (OCR) Fluorometric Assay Kit (E-BC-F068)

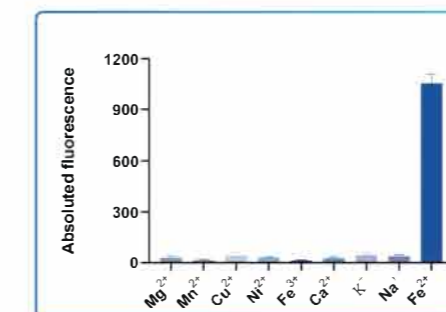
Stable fluorescence signal ensures reliable kinetic measurements



ATP/ADP Ratio Chemiluminescence Assay Kit (E-BC-F004)

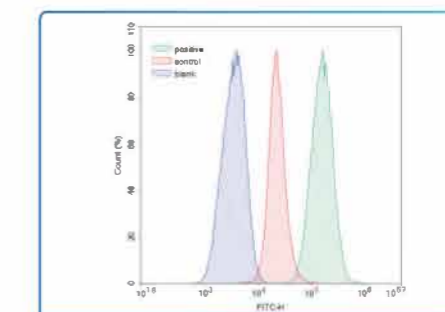
High sensitivity and accuracy

### Featured Products



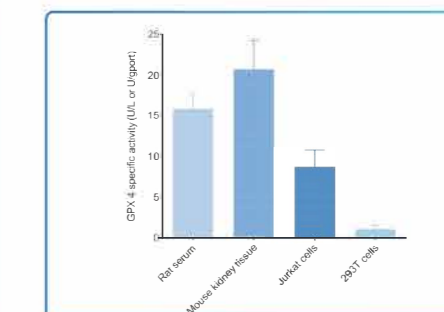
Cell Ferrous Iron (Fe<sup>2+</sup>) Fluorometric Assay Kit (E-BC-F101)

High specificity and accuracy



Lipid Peroxide (LPO) Fluorometric Assay Kit (E-BC-F003)

Simple operation compatible with multiple instruments



Glutathione Peroxidase 4 (GPX4) Activity Assay Kit (E-BC-K883-M)

Innovative technology optimized for cell sample analysis