

MTT, 1g**PG-3970-1G**

MTT is a yellow tetrazolium salt widely used in cell biology and biotechnology for measuring cell viability, proliferation, and cytotoxicity. Viable cells reduce MTT to insoluble purple formazan crystals through mitochondrial enzymatic activity, providing a quantitative assessment of metabolically active cells.

Details

Product Name	MTT
Chemical Name	3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium Bromide
Molecular Formula	C ₁₈ H ₁₆ BrN ₅ S
Molecular Weight	414.32 g/mol
Appearance	Yellow to orange crystalline powder
Purity	≥98% (typical)
CAS Number	298-93-1
Solubility	Soluble in water, PBS, and cell culture media
Storage Condition	Store at 2–8°C, protected from light
Shelf Life	Refer to product label
Grade	Cell Culture / Molecular Biology Grade
Applications / Uses	Cell viability assays, cell proliferation studies, cytotoxicity testing, drug screening, cancer research, cell metabolism studies
Working Principle	Metabolically active cells reduce MTT to purple formazan crystals, which are subsequently dissolved and quantified spectrophotometrically
Detection Wavelength	Typically 540–600 nm (commonly 570 nm)

Safety

Avoid inhalation, ingestion, and contact with skin or eyes. Wear appropriate PPE including gloves, lab coat, and safety goggles. Handle solutions protected from light. Follow institutional safety and waste disposal guidelines. standard laboratory handling procedures.