Hello Bio, Inc. 304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500 F. 609-228-4994

customercare-usa@hellobio.com



DATASHEET

MTT

Product overview

Name MTT
Cat No HB5283
Biological description Overview

MTT is a tetrazolium dye which is commonly used in cell proliferation or cell growth assays In living cells, MTT is converted by NAD(P)H-dependent cellular oxidoreductase enzymes to its insoluble formazan which is purple/dark blue.

Uses and Applications

The color intensity can be measured colormetrically (at 540 or 570 nM) which allows quantitation of cell

viability and cell proliferation.

Alternative names Thiazolyl blue tetrazolium bromide

Biological action Dyes & stains Purity >97%

Description Dye commonly used for cell proliferation measurement

Solubility & Handling

Storage instructions +4°C

Solubility overview Soluble in water (5 mg/ml)

Storage of solutions Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if

storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Shipping Conditions Stable for ambient temperature shipping. Follow storage instructions on receipt.

Important This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

for human or veterinary use

Chemical Data

Chemical name Molecular Weight Chemical structure 3-(4,5-dimethyl-1,3-thiazol-2-yl)-2,5-diphenyl-2H-tetrazol-3-ium bromide

414.32

Molecular Formula $C_{18}H_{16}N_5SBr$ CAS Number298-93-1PubChem identifier64965

SMILES CC1=C(C)SC([N+]2=NC(C4=CC=C4)=NN2C3=CC=CC=C3)=N1.[Br-]

InChi InChi=1S/C18H16N5S.BrH/c1-13-14(2)24-18(19-13)23-21-17(15-9-5-3-6-10-15)20-22(23)16-11-7-4

-8-12-16;/h3-12H,1-2H3;1H/q+1;/p-1

InChiKey AZKSAVLVSZKNRD-UHFFFAOYSA-M

MDL number MFCD00011964

References

Optimization of the tetrazolium dye (MTT) colorimetric assay for cellular growth and viability

Sylvester PW (2011) Methods Mol Biol 716 **PubMedID**21318905

Limitations of the 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyl-2H-tetrazolium bromide (MTT) assay when compared to three commonly used cell enumeration assays

van Tonder A *et al* (2015) BMC Res Notes 8 **PubMedID** 25884200

A comparative study of colorimetric cell proliferation assays in immune cells

Koyanagi M *et al* (2016) Cytotechnology 68(4) **PubMedID** 26280992