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

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

customercare-usa@hellobio.com

DATASHEET

MTT

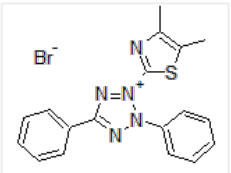
Product overview

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)
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	3-(4,5-dimethyl-1,3-thiazol-2-yl)-2,5-diphenyl-2H-tetrazol-3-ium bromide
Molecular Weight	414.32
Chemical structure	
Molecular Formula	$C_{18}H_{16}N_5SBr$
CAS Number	298-93-1
PubChem identifier	64965
SMILES	CC1=C(C)SC([N+]2=NC(C4=CC=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