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DATASHEET

MTT

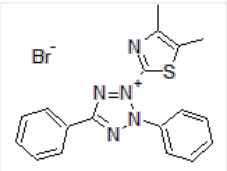
Product overview

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