

## DATASHEET

### MTT

#### Product overview

<b>Name</b>	MTT
<b>Cat No</b>	HB5283
<b>Biological description</b>	<b>Overview</b>

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

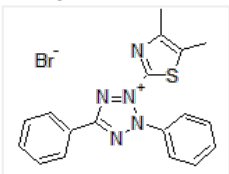
The color intensity can be measured colorimetrically (at 540 or 570 nm) which allows quantitation of cell viability and cell proliferation.

<b>Alternative names</b>	Thiazolyl blue tetrazolium bromide
<b>Biological action</b>	Dyes & stains
<b>Purity</b>	>97%
<b>Description</b>	Dye commonly used for cell proliferation measurement

#### Solubility & Handling

<b>Storage instructions</b>	+4 °C
<b>Solubility overview</b>	Soluble in water (5 mg/ml)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

#### Chemical Data

<b>Chemical name</b>	3-(4,5-dimethyl-1,3-thiazol-2-yl)-2,5-diphenyl-2H-tetrazol-3-ium bromide
<b>Molecular Weight</b>	414.32
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>18</sub> H <sub>16</sub> N <sub>5</sub> SBr
<b>CAS Number</b>	298-93-1
<b>PubChem identifier</b>	64965
<b>SMILES</b>	CC1=C(C)SC([N+]2=NC(C4=CC=CC=C4)=NN2C3=CC=CC=C3)=N1.[Br-]
<b>InChi</b>	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
<b>InChiKey</b>	AZKSAVLVSZKNRD-UHFFFAOYSA-M
<b>MDL number</b>	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](#)

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