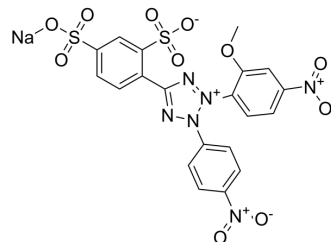


## WST-8

<b>Cat. No.:</b>	HY-D0831
<b>CAS No.:</b>	193149-74-5
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>13</sub> N <sub>6</sub> NaO <sub>11</sub> S <sub>2</sub>
<b>Molecular Weight:</b>	600.47
<b>Target:</b>	Fluorescent Dye
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 2 years; -20°C, 1 year (sealed storage, away from moisture and light)



## SOLVENT & SOLUBILITY

### In Vitro

H<sub>2</sub>O : 83.33 mg/mL (138.77 mM; Need ultrasonic)  
DMSO : 10 mg/mL (16.65 mM; Need ultrasonic)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.6654 mL	8.3268 mL	16.6536 mL
	5 mM	0.3331 mL	1.6654 mL	3.3307 mL
	10 mM	0.1665 mL	0.8327 mL	1.6654 mL

Please refer to the solubility information to select the appropriate solvent.

### In Vivo

- Add each solvent one by one: PBS  
Solubility: 100 mg/mL (166.54 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 1 mg/mL (1.67 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 1 mg/mL (1.67 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 1 mg/mL (1.67 mM); Clear solution

## BIOLOGICAL ACTIVITY

### Description

WST-8 is a water-soluble tetrazolium dye, WST-8 enhances sensitivity of the WST-8-based assay over the conventional MTS-based assay.

### In Vitro

The generally used MTS-based assay is compared with a bioassay employing a water-soluble tetrazolium dye, WST-8, using NFS-60 cells at a concentration of 7×10<sup>5</sup> cells/mL against 800 IU/mL of PEGylated G-CSF at 24, 48, and 72 h time points to

determine the efficacy of PEGylated G-CSF. Further, the optimized WST-8 dye-based assay is used to test the potency of various commercially available PEGylated G-CSF preparations. The results demonstrate enhanced sensitivity of the WST-8-based assay over the conventional MTS-based assay for determining the potency of PEGylated G-CSF using the NFS-60 cell line<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Nat Commun. 2022 Oct 12;13(1):6016.
- Sci China Life Sci. 2021 Jun 25.
- J Nat Prod. 2022 Dec 21.
- Microorganisms. 2021 Mar 31;9(4):726.
- RSC Adv. 2020, 10, 43480-43488.

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## REFERENCES

[1]. Tiwari K, et al. A sensitive WST-8-based bioassay for PEGylated granulocyte colony stimulating factor using the NFS-60 cell line. Pharm Biol. 2015 Jun;53(6):849-54.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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