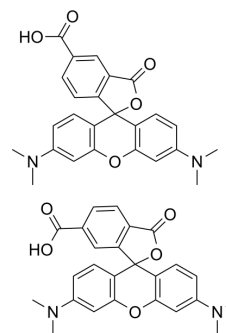


## 5(6)-TAMRA

Cat. No.:	HY-15944
CAS No.:	98181-63-6
Molecular Formula:	C <sub>25</sub> H <sub>22</sub> N <sub>2</sub> O <sub>5</sub>
Molecular Weight:	430.45
Target:	Fluorescent Dye
Pathway:	Others
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

In Vitro	DMSO : ≥ 20.83 mg/mL (48.39 mM) * "≥" means soluble, but saturation unknown.					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	2.3232 mL	11.6158 mL	23.2315 mL
			5 mM	0.4646 mL	2.3232 mL	4.6463 mL
			10 mM	0.2323 mL	1.1616 mL	2.3232 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.08 mg/mL (4.83 mM); Suspended solution; Need ultrasonic					

### BIOLOGICAL ACTIVITY

Description	5(6)-TAMRA is a fluorescent dye molecule widely used as a label for peptides and proteins.
In Vitro	<ol style="list-style-type: none"> <li>Peptide Labeling: The polypeptide R9 was incubated with TAMRA (4-equivalent) in dimethylformamide containing benzotriazole-1-acyloxy-tripyrrodiene-phosphohexafluorophosphate (4-equivalent) and diisopropylethylamine (8-equivalent) for 4 hours and labeled on the resin. Wash the resin with dimethylformamide and methylene chloride, and then de-protect as described above.</li> <li>Peptide Internalization: CHO cells were inoculated with Ham's F-12 medium in a 4-well Lab-Tek-II chamber slide (Nalge Nunc International, Naperville, IL). Labeled peptides were added to each slide and incubated at 37°C. After 60 minutes, cells were washed with PBS containing Ca<sup>2+</sup> (0.1 g/L) and Mg<sup>2+</sup> (0.1 g/L) (6 times). Fluorescence microscope observation.</li> <li>Heparin-Affinity Chromatography: The labeled peptide (~2mg) was loaded onto the column and eluted in the same buffer with a linear gradient of NaCl (0-2 M). Peptide elution was monitored at 280 nm and 535 nm absorbance.</li> </ol>

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#### 4. Binding of TAMRA-R9 to Heparin:

When TAMRA-R9 binds to soluble heparin, fluorescence enhancement at 590 nm (excitation:531 nm).

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

## CUSTOMER VALIDATION

- Biomaterials. 2021, 120788.

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## REFERENCES

[1]. Fuchs SM, et al. Pathway for polyarginine entry into mammalian cells. *Biochemistry*. 2004 Mar 9;43(9):2438-44.

[2]. Gerber D, et al. Insertion and organization within membranes of the delta-endotoxin pore-forming domain, helix 4-loop-helix 5, and inhibition of its activity by a mutant helix 4 peptide. *J Biol Chem*. 2000 Aug 4;275(31):23602-7.

[3]. Vinayak R, et al. Automated, solid-phase coupling of rhodamine dye acids to 5' amino oligonucleotides. *Nucleic Acids Symp Ser*. 2000;(44):257-8.

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

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