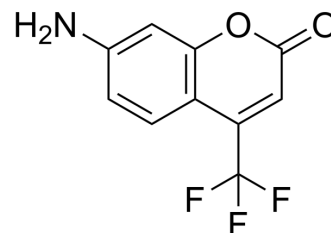


7-Amino-4-(trifluoromethyl)coumarin

Cat. No.:	HY-D0981
CAS No.:	53518-15-3
Molecular Formula:	C ₁₀ H ₆ F ₃ NO ₂
Molecular Weight:	229.16
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (436.38 mM; Need ultrasonic)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div>	Mass	1 mg	5 mg	10 mg
		1 mM		4.3638 mL	21.8188 mL	43.6376 mL
		5 mM		0.8728 mL	4.3638 mL	8.7275 mL
		10 mM		0.4364 mL	2.1819 mL	4.3638 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: ≥ 2.5 mg/mL (10.91 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	7-Amino-4-(trifluoromethyl)coumarin (Coumarin 151) is a fluorescent marker for the sensitive detection of proteinases. The excitation and emission wavelengths are 400 and 490 nm, respectively.
In Vitro	<p>Amino acid and peptide derivatives of 7-amino-4-(trifluoromethyl)coumarin are used to monitor peptidase activities. Caspase activation is measured using the fluorogenic compound N-acetyl-asp-glu-val-asp-7-Amino-4-(trifluoromethyl)coumarin (Ac-DEVD-AFC). This substrate rapidly enters cells where it is efficiently cleaved at the aspartate residue by specific caspases, yielding the fluorescent compound 7-Amino-4-(trifluoromethyl)coumarin (AFC). Following cell disruption, released 7-Amino-4-(trifluoromethyl)coumarin is separated on HPLC and detected by fluorescence. The appearance of 7-Amino-4-(trifluoromethyl)coumarin in cells is blocked by the pancaspase inhibitor benzyloxycarbonyl-val-al-asp-fluoromethylketone, thus establishing that intracellular caspases are responsible for the cleavage^[1]. γ-glutamyl-7-amino-4-(trifluoro-methyl)coumarin is synthesized and used as a substrate for flurimetric assay of γ-glutamyltranspeptidase. The reaction product 7-amino-4-(trifluoromethyl)coumarin is fluorescent at neutral pH values and with excitation and emission wavelengths of 400 and 490 nm, respectively, concentration is linearly related to fluorescence over the range of 10 to 300 pmol/3 mL reaction mixture^[2].</p>

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

REFERENCES

- [1]. Tao Z, et al. Caspase activation by anticancer drugs: the caspase storm. Mol Pharm. 2007 Jul-Aug;4(4):583-95.
- [2]. White IN, et al. A continuous fluorometric assay for gamma-glutamyltranspeptidase. Anal Biochem. 1996 Jan 1;233(1):71-5.
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Caution: Product has not been fully validated for medical applications. For research use only.

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