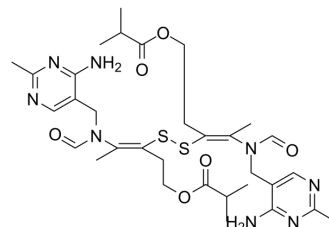


Sulbutiamine

Cat. No.:	HY-B2229
CAS No.:	3286-46-2
Molecular Formula:	C ₃₂ H ₄₆ N ₈ O ₆ S ₂
Molecular Weight:	702.89
Target:	Others
Pathway:	Others
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (142.27 mM; Need ultrasonic)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div>	Mass	1 mg	5 mg	10 mg
		1 mM		1.4227 mL	7.1135 mL	14.2270 mL
		5 mM		0.2845 mL	1.4227 mL	2.8454 mL
		10 mM		0.1423 mL	0.7113 mL	1.4227 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 (3.56 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (3.56 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Sulbutiamine is a synthetic analogue of vitamin B1 used for the treatment of asthenia.
In Vitro	<p>Sulbutiamine shows neuroprotective effects on hippocampal CA1 pyramidal neurons subjected to oxygen-glucose deprivation. Sulbutiamine enhances electrophysiological properties such as excitatory synaptic transmissions and intrinsic neuronal membrane input resistance in a concentration-dependent manner^[1]. Sulbutiamine attenuates apoptotic cell death induced by serum deprivation and stimulates GSH and GST activity in a dose dependent manner. Furthermore, sulbutiamine decreases the expression of cleaved caspase-3 and AIF^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Kwag J, et al. Evidence for neuroprotective effect of sulbutiamine against oxygen-glucose deprivation in rat hippocampal CA1 pyramidal neurons. Biol Pharm Bull. 2011;34(11):1759-64.
- [2]. Kang KD, et al. Sulbutiamine counteracts trophic factor deprivation induced apoptotic cell death in transformed retinal ganglion cells. Neurochem Res. 2010 Nov;35(11):1828-39.
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Caution: Product has not been fully validated for medical applications. For research use only.

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