

Product Name: Spermidine trihydrochloride Revision Date: 03/22/2023

# **Product Data Sheet**

NH<sub>2</sub>

# Spermidine trihydrochloride

Solvent & Solubility				
	E Burgan		1-50	
Storage:	Store at -20°C		H <sub>2</sub> N HCI HCI HCI	
Pathway:	NMDA Receptor		JC ACN	
Target:	Membrane Transporter/Ion Cl	nannel		
Synonyms:			NH	
M.Wt:	254.63		OF	
Formula:	C7H19N3·3HCI			
CAS No.:	334-50-9			
Cat. No.:	B6523		mere Parente	

	insoluble in DMSO; i	nsoluble in EtOH; $\geq$ 10 mg/mL	in H2O		
		Mass			
In Vitro		Solvent	1mg	5mg	10mg
	Preparing	Concentration			
	Slock Solutions	1 mM	3.9273 mL	19.6363 mL	39.2727 mL
		5 mM	0.7855 mL	3.9273 mL	7.8545 mL
	Be the Unicourt	10 mM	0.3927 mL	1.9636 mL	3.9273 mL

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

## **Biological Activity**

Shortsummary A NMI

A NMDA receptor agonist

#### IC50 & Target

Cell	Viability	Assay
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	Cell Line;	Hippocampal slices and homogenates from rats
In Vitro	Preparation method:	
	Reacting conditions:	0.05 ~ 10 μM spermidine for 30 min incubation
	Applications:	Spermidine at the concentrations of 0.5 and 1 $\mu M$ decreased Na+, K+-ATPase
		activity in slices, but not in homogenates. Spermidine also increased NO2 plus

		NO3 (NOx) levels in slices.		
	Animal experiment	Animal experiment		
In Vivo	Animal models:	Male Swiss-Webster mice		
	Dosage form:	200 µg/mouse		
	Bream	Orally		
	Applications:	Spermidine at 200 µg/mouse did not alter the basal cGMP level in mouse		
		cerebellum. Moreover, spermidine attenuated responses mediated through		
		NMDA, NMDA-associated glycine receptor and quisqualate receptors. Since		
		spermidine is widely distributed in neural and non-neural tissues, it plays a		
		potential key role in cell differentiation and growth.		
	Other notes:	The technical data provided above is for reference only.		

### References

1. Munir M, Subramaniam S, McGonigle P. Polyamines modulate the neurotoxic effects of NMDA in vivo. Brain Research, 1993, 616(1-2): 163-170.

2. Carvalho FB, Mello CF, Marisco PC, et al. Spermidine decreases Na<sup>+</sup>, K<sup>+</sup>-ATPase activity through NMDA receptor and protein kinase G activation in the hippocampus of rats. European Journal of Pharmacology, 2012, 684(1-3): 79-86.

3. Rao TS, Cler JA, Oei EJ, et al. The polyamines, spermine and spermidine, negatively modulate N-methyl-d-aspartate (NMDA) and quisqualate receptor mediated responses in vivo: Cerebellar cyclic GMP measurements. Neurochemistry International, 1990, 16(2): 199-206.



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#### NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

## APExBIO Technology

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