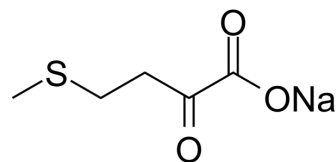


MTOB sodium

Cat. No.:	HY-135046
CAS No.:	51828-97-8
Molecular Formula:	C ₅ H ₇ NaO ₃ S
Molecular Weight:	170.16
Target:	Others
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 125 mg/mL (734.60 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		5.8768 mL	29.3841 mL	58.7682 mL
	5 mM		1.1754 mL	5.8768 mL	11.7536 mL
	10 mM		0.5877 mL	2.9384 mL	5.8768 mL

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

BIOLOGICAL ACTIVITY

Description

MTOB sodium is a potent C-terminal binding protein (CtBP) inhibitor. MTOB sodium attenuates repetitive head injury-elicited neurologic dysfunction and neuroinflammation via inhibition of the transactivation activity of CtBP1 and CtBP2. MTOB sodium antagonizes the transcriptional regulatory activity of CtBP1 and CtBP2 by eviction from their target promoters in breast cancer cell lines^{[1][2]}.

IC₅₀ & Target

CtBP^[1]

In Vitro

MTOB sodium (10 mM) causes significant derepression (P<0.05) of 40% of CtBP target genes (including FGF9, CTNNB1, CEBPB, et al.) in MCF-7 and 46% in MBA-MD-231; increases the pro-epithelial E-cadherin/Vimentin ratio while reducing the pro-mesenchymal CD44/CD24 ratio, with a more significant trend (P<0.05) in MCF-7^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

MTOB sodium (860 mg/kg; IP, at 1 h and 18 h after the first injury) effectively suppresses the increases duration of righting reflex, and significantly decreased neurological severity score (NSS) scores^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6 mice (traumatic brain injury) ^[1]
Dosage:	860 mg/kg
Administration:	IP, at 1 h and 18 h after the first injury
Result:	Effectively suppressed the increased duration of righting reflex, and significantly decreased NSS scores.

CUSTOMER VALIDATION

- Cytokine. 2023 Nov 16:173:156436.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Li H, et al. C-terminal binding proteins 1 and 2 in traumatic brain injury-induced inflammation and their inhibition as an approach for anti-inflammatory treatment. *Int J Biol Sci.* 2020 Feb 4;16(7):1107-1120.

[2]. Di LJ, et al. Genome-wide profiles of CtBP link metabolism with genome stability and epithelial reprogramming in breast cancer. *Nat Commun.* 2013;4:1449.

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

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