
Product Data Sheet

Product Name: ZJ 43
Cat. No.: GC18065

Chemical Properties

Cas. No. 723331-20-2

Chemical Name (2S)-2-[[[(1S)-1-carboxy-3-methylbutyl]carbamoylamino]pentanedioic acid

SMILES CC(C)CC(C(=O)O)NC(=O)NC(CCC(=O)O)C(=O)O

Formula $C_{12}H_{20}N_2O_7$ M.Wt 304.3

Solubility <30.43mg/ml in Water; <30.43mg/ml in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

IC50: 2.4 nM

ZJ-43 is a N-acetylaspartylglutamate (NAAG) peptidase inhibitor.

The peptide neurotransmitter N-acetylaspartylglutamate (NAAG) is reported to act as an agonist at group II metabotropic glutamate receptors. NAAG is inactivated by extracellular peptidase activity leading to yielding glutamate and N-acetylaspartate.

In vitro: As a potent inhibitor of glutamate carboxypeptidase II and III (GCP II and III) with Kivalues of 0.8 and 23 nM respectively, ZJ-43 inhibited the hydrolysis of NAAG via indirect interactions with NMDA or metabotropic glutamate receptors [1].

In vivo: Intravenous injection of ZJ-43 could suppress both phases of the agitation behaviour induced by paw formalin injection in the rat neuropathic pain model. Moreover, intravenous administration of ZJ-43 attenuated the level of mechanical

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

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allodynia induced by the nerve ligation. These effects of ZJ-43 in both the formalin test and the partial sciatic nerve ligation model were completely antagonized by pretreatment with LY-341495, which was a highly selective group II mGluR antagonist [1].

Clinical trial: N/A

Reference:

[1] Yamamoto T1, Hirasawa S, Wroblewska B, Grajkowska E, Zhou J, Kozikowski A, Wroblewski J, Neale JH. Antinociceptive effects of N-acetylaspartylglutamate (NAAG) peptidase inhibitors ZJ-11, ZJ-17 and ZJ-43 in the rat formalin test and in the rat neuropathic pain model. *Eur J Neurosci*. 2004 Jul;20(2):483-94.

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