
Product Data Sheet

Product Name: Otaplimastat

Cat. No.: GC63132

Chemical Properties

Cas. No. 1176758-04-5

Formula C₂₈H₃₄N₆O₅ M.Wt 534.61

Solubility Storage

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**

Otaplimastat (SP-8203), a matrix metalloproteinase (MMP) inhibitor, blocks N-methyl-D-aspartate (NMDA) receptor-mediated excitotoxicity in a competitive manner.

Otaplimastat also exhibits anti-oxidant activity. Otaplimastat can be used for the research of brain ischemic injury[1][2][3].

Otaplimastat (87.5-350 μM; 20 min) protects neuronal cells against NMDA-induced cell death in a competitive manner[1]. Otaplimastat (350 μM) inhibits Ca²⁺ influx following activation of NMDA receptors in primary cultured neuron[1]. Otaplimastat (2-200 μM; pretreated for 4 h) significantly suppresses H₂O₂-induced cell death and reactive oxygen species production[2].

Otaplimastat (10-20 mg/kg; i.p. 30 min before occlusion and 1 h after reperfusion) prevents ischemic neuronal death in the occlusion model of MCA[1]. Otaplimastat (5-10 mg/kg; i.p. daily for 10 days) attenuates impairment of stroke-induced motor function[2].

[1]. Noh SJ, et, al. SP-8203 shows neuroprotective effects and improves cognitive impairment in ischemic brain injury through NMDA receptor. *Pharmacol Biochem Behav.* 2011 Nov;100(1):73-80.

[2]. Noh SJ, et, al. SP-8203 reduces oxidative stress via SOD activity and behavioral

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

deficit in cerebral ischemia. Pharmacol Biochem Behav. 2011 Mar;98(1):150-4.

[3]. Kim JS, et, al. Safety and Efficacy of Otaplimastat in Patients with Acute Ischemic Stroke Requiring tPA (SAFE-TPA): A Multicenter, Randomized, Double-Blind, Placebo-Controlled Phase 2 Study. Ann Neurol. 2020 Feb;87(2):233-245.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA