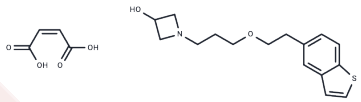
Data Sheet (Cat.No.T4422)

TargetMol

Edonerpic maleate

Chemical Properties



CAS No. : 519187-97-4

Formula: C20H25NO6S

Molecular Weight: 407.48

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Edonerpic maleate (T-817 maleate) is a neurotrophic agent which can inhibit amyloid-β peptides (Aβ).
Targets(IC50)	Beta Amyloid
In vitro	Treatment with Edonerpic maleate (T-817MA) effectively preserves cortical neurons against Aβ(1-42) damage. By pre-treating for twenty-four hours and maintaining continuous exposure, Edonerpic maleate safeguards neurons from oxidative stress-induced death and nearly completely inhibits GSH reduction at both 0.1 and 1 μM concentrations. Furthermore, hippocampal slices exposed to 1 μM of Edonerpic maleate exhibit a significant increase in the generation and elongation of neurites compared to untreated controls, with notable enhancements in neurite length observed at concentrations of 0.1 and 1 μM.
In vivo	The post hoc analysis revealed that the average density of PSA-positive cells was significantly higher in both the vehicle and the Aβ infusion plus high-dose Edonerpic maleate (T-817MA) groups compared to the Aβ infusion control group ($P<0.01$). These findings suggest that the vehicle and Aβ infusion combined with high-dose Edonerpic maleate groups not only demonstrate enhanced learning capabilities in the place learning task (PLT) but also show increased neurogenesis. However, the administration of Edonerpic maleate and donepezil did not lead to a significant change in the average density of normal granule cells, indicating no notable differences in granule cell density between the Aβ infusion control group, and the groups treated with Aβ infusion plus high-dose Edonerpic maleate, Aβ infusion plus low-dose Edonerpic maleate, and Aβ infusion plus donepezil.
Cell Research	A cortical neuron/glia coculture is prepared. Edonerpic maleate (T-817MA) is added to the cocultures at concentrations of 0 (control), 0.01, 0.1, and 1 μM, and the cells are subsequently incubated for 5 min or 24 h. H_2O_2 is then added to the coculture at a concentration of 100 μM, and the cells are incubated for another 24 h. For the normal group, the preparations are maintained in the medium with neither Edonerpic maleate nor H_2O_2. Neuronal cell viability is quantified by measuring the Monoclonal anti-microtubule-associated protein 2 (MAP2) immunoreactivity
Animal Research	Edonerpic maleate (T-817MA) (high-dose: 8.4 mg/kg and low-dose: 0.84 mg/kg) and donepezil (0.5 mg/kg) are dissolved in distilled water in a volume of 5 mL/kg.Wistar rats (7 weeks, n=47) are used in this study. All rats are given food and water ad libitum in a

Animal Research	clear cage and handled on three consecutive days before start of the experiments. The housing area is provided a temperature-controlled environment under a 12/12 h light cycle. These rats are divided into five groups: vehicle (n=11), Aβ infusion control (n=10), Aβ infusion+high-dose Edonerpic maleate (T-817MA) (8.4 mg/kg) (n=11), Aβ infusion+low-dose Edonerpic maleate (0.84 mg/kg) (n=9) and Aβ infusion+donepezil (0.5 mg/kg) (n=7)

Solubility Information

Solubility	DMSO: 155 mg/mL (380.39 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4541 mL	12.2705 mL	24.5411 mL
5 mM	0.4908 mL	2.4541 mL	4.9082 mL
10 mM	0.2454 mL	1.2271 mL	2.4541 mL
50 mM	0.0491 mL	0.2454 mL	0.4908 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Hirata K,etal.A novel neurotrophic agent, T-817MA [1-{3-[2-(1-benzothiophen-5-yl) ethoxy] propyl}-3-azetidinol maleate], attenuates amyloid-beta-induced neurotoxicity and promotes neurite outgrowth in rat cultured central nervous system neurons.J Pharmacol Exp Ther. 2005 Jul;314(1):252-9.

Kimura T,etal. T-817MA, a neurotrophic agent, ameliorates the deficits in adult neurogenesis and spatial memory in rats infused i.c.v. with amyloid-beta peptide.Br J Pharmacol. 2009 Jun;157(3):451-63.