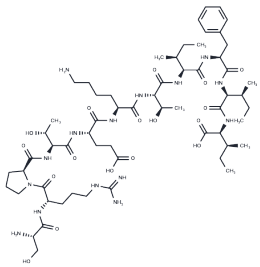
Data Sheet (Cat.No.TP1333)

TargetMol

Gap 27

Chemical Properties



CAS No. : 198284-64-9

Formula: C60H101N15O17

Molecular Weight: 1304.53

Storage: Keep away from moisture
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	Gap 27 is a peptide(Ser-Arg-Pro-Thr-Glu-Lys-Thr-Ile-Phe-Ile-Ile) derived from connexin 43 that is a selective gap junction blocker.
Targets(IC50)	Gap Junction Protein
In vitro	Gap 27 significantly reduces the population of TRAP-positive mononuclear and multinucleated rat osteoclasts on bovine bone slices and decreases the functionality of remaining osteoclasts, as demonstrated by a lower percentage of osteoclasts displaying actin rings among all TRAP-positive cells. Moreover, the area resorbed by these treated cultures is substantially reduced[1]. When applied to the carotid artery, Gap 27 at a concentration of 500 μM effectively eliminates the hyperpolarization response to acetylcholine, but does not affect the response to levcromakalim, indicating a specific inhibition of acetylcholine-induced, endothelium-dependent hyperpolarizations in the guinea-pig-isolated internal carotid artery[2].
In vivo	Gap 27 (300 μM) inhibits relaxation by 40% in thoracic aorta and the superior mesenteric artery. Gap 27 also attenuates the endothelium-dependent component of the relaxation induced by ATP in thoracic aorta but did not modify force development in response to PhE[3].

Solubility Information

Solubility	DMSO: 50 mg/mL (38.33 mM),Sonication is recommended. H2O: 10 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 5 mg/mL (3.83 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.7666 mL	3.8328 mL	7.6656 mL
5 mM	0.1533 mL	0.7666 mL	1.5331 mL
10 mM	0.0767 mL	0.3833 mL	0.7666 mL
50 mM	0.0153 mL	0.0767 mL	0.1533 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

Ilvesaro J, et al. Connexin-mimetic peptide Gap 27 decreases osteoclastic activity. BMC Musculoskelet Disord. 2001; 2:10.

Poon C C W, Au-Yeung C, Wong K Y, et al.Icariin promotes cell adhesion for osteogenesis in bone marrow stromal cells via binding to integrin α5β1.Phytomedicine.2024: 155887.