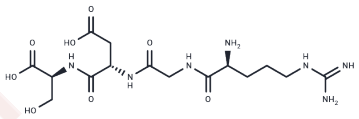
Data Sheet (Cat.No.T10366)

TargetMol

Arg-Gly-Asp-Ser

Chemical Properties



CAS No. : 91037-65-9

Formula: C15H27N7O8

Molecular Weight: 433.42

Storage: Keep away from moisture,Store at low temperature
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	Arg-Gly-Asp-Ser (RGDS peptide) is a conserved tetrapeptide sequence found on fibronectin, fibrinogen α, and von Willebrand factor. It binds to integrins on the cell surface, inhibiting thrombin-induced platelet-fibrinogen interaction.
Targets(IC50)	Integrin
In vitro	Arg-Gly-Asp-Ser increases mRNA expression and secretion of TGF-β1 by stimulating the promoter of TGF-β1 gene. [1] Cell binding to RGDS eliminates apoptosis through the mitochondrial pathway, and inhibition of apoptosis depends on the activity of phosphatidylinositol 3-kinase. [2]
In vivo	Arg-Gly-Asp-Ser (1, 2.5, or 5 mg/kg, intraperitoneally administered) inhibited LPS-induced increases in the number of neutrophils and macrophages, total protein levels, TNF-α and MIP-2 levels, and matrix metalloproteinase-9 activity in mouse bronchoalveolar lavage fluid (BAL). [3] Arg-Gly-Asp-Ser almost completely inhibited lung colonization of intravenous PAK 17.15 cells in C57BL/6 mice. [4]

Solubility Information

Solubility	DMSO: 40 mg/mL (92.29 mM),Sonication is recommended. H2O: 25 mg/mL (57.68 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3072 mL	11.5362 mL	23.0723 mL
5 mM	0.4614 mL	2.3072 mL	4.6145 mL
10 mM	0.2307 mL	1.1536 mL	2.3072 mL
50 mM	0.0461 mL	0.2307 mL	0.4614 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

Ortega-Velázquez R, et al. Arg-Gly-Asp-Ser (RGDS) peptide stimulates transforming growth factor beta1 transcription and secretion through integrin activation. FASEB J. 2003 Aug;17(11):1529-31.
Sun B, Wu H, Lu J, et al. Irisin reduces bone fracture by facilitating osteogenesis and antagonizing TGF-β/Smad signaling in a growing mouse model of osteogenesis imperfecta. Journal of Orthopaedic Translation. 2023, 38: 175-189.
Grigoriou V, et al. Apoptosis and survival of osteoblast-like cells are regulated by surface attachment. J Biol Chem. 2005 Jan 21;280(3):1733-9.
Moon C, et al. Synthetic RGDS peptide attenuates lipopolysaccharide-induced pulmonary inflammation by inhibiting integrin signaled MAP kinase pathways. Respir Res. 2009 Mar 9;10(1):18.
Ugen KE, et al. Inhibition of tumor cell-induced platelet aggregation and experimental tumor metastasis by the synthetic Gly-Arg-Gly-Asp-Ser peptide. J Natl Cancer Inst. 1988 Nov 16;80(18):1461-6.
Komazawa H, et al. Inhibition of tumor metastasis by Arg-Gly-Asp-Ser (RGDS) peptide conjugated with sulfated chitin derivative, SCM-chitin-RGDS. Clin Exp Metastasis. 1993 Nov;11(6):482-91.