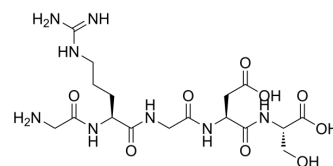


Gly-Arg-Gly-Asp-Ser

Cat. No.: HY-P0295
CAS No.: 96426-21-0
Molecular Formula: C₁₇H₃₀N₈O₉
Molecular Weight: 490.47
Sequence: Gly-Arg-Gly-Asp-Ser
Sequence Shortening: GRGDS
Target: Integrin
Pathway: Cytoskeleton
Storage: Sealed storage, away from moisture
 Powder -80°C 2 years
 -20°C 1 year



* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (101.94 mM; Need ultrasonic)
 H₂O : 33.33 mg/mL (67.96 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.0389 mL	10.1943 mL	20.3886 mL
	5 mM	0.4078 mL	2.0389 mL	4.0777 mL
	10 mM	0.2039 mL	1.0194 mL	2.0389 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (203.89 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (5.10 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (5.10 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (5.10 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Gly-Arg-Gly-Asp-Ser is a pentapeptide that forms the cell-binding domain of a glycoprotein, osteopontin. Gly-Arg-Gly-Asp-Ser binds to integrin receptors αβ3 and αβ5 with estimated IC₅₀ of -5 and -6.5 μM^[1]

IC₅₀ & Target	IC ₅₀ : 5 μM (αvβ3), 6.5 μM (αvβ5) ^[2]
In Vitro	Gly-Arg-Gly-Asp-Ser binds to integrin receptors αvβ3, with IC ₅₀ of 5 μM ^[1] . Gly-Arg-Gly-Asp-Ser-immobilized TiO ₂ nanotubes enhance osteoblast-like cell (MG-63) adhesion, and significantly increased cell spreading and proliferation ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Bernhagen D, et al. High-Affinity RGD-Knottin Peptide as a New Tool for Rapid Evaluation of the Binding Strength of Unlabeled RGD-Peptides to αvβ3, αvβ5, and α5β1 Integrin Receptors. *Anal Chem.* 2017 Jun 6;89(11):5991-5997.

[2]. Kim GH, et al. Evaluation of Osteoblast-Like Cell Viability and Differentiation on the Gly-Arg-Gly-Asp-Ser Peptide Immobilized Titanium Dioxide Nanotube via Chemical Grafting. *J Nanosci Nanotechnol.* 2016 Feb;16(2):1396-9.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA