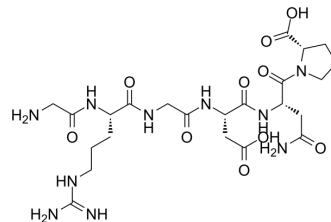


RGD peptide (GRGDNP)

Cat. No.:	HY-P1740
CAS No.:	114681-65-1
Molecular Formula:	C ₂₃ H ₃₈ N ₁₀ O ₁₀
Molecular Weight:	614.61
Sequence:	Gly-Arg-Gly-Asp-Asn-Pro
Sequence Shortening:	GRGDNP
Target:	Integrin; Apoptosis
Pathway:	Cytoskeleton; Apoptosis
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	RGD peptide (GRGDNP) is an inhibitor of integrin-ligand interactions. RGD peptide (GRGDNP) competitively inhibits $\alpha 5\beta 1$ binding with extracellular matrix (ECM). RGD peptide (GRGDNP) promotes apoptosis through activation of conformation changes that enhance pro-caspase-3 activation and autoprocessing. RGD peptide (GRGDNP) plays an important role in cell adhesion, migration, growth, and differentiation ^{[1][2][3]} .
IC₅₀ & Target	$\alpha 5\beta 1$
In Vitro	RGD peptide (GRGDNP) (50 μ M ; preincubation for 3 hours before stretch) abolishes stretch-induced IKK activation and IL-6 mRNA expression. It shows little effect on the IKK activity and IL-6 mRNA expression in unstretched HUVECs ^[2] . RGD peptide (GRGDNP) (300 μ g/mL; for 6 hours) completely reverses enhanced FN1 expression in oxygen glucose deprivation(OGD) treated primary hippocampal neurons, HT22 cell lines and in its sEVs ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Dis. 2022 Jul 1;13(7):577.
- Biofabrication. 2021 Apr 9.
- Biomacromolecules. 2023 Mar 21.

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REFERENCES

- [1]. C D Buckley, et al. RGD peptides induce apoptosis by direct caspase-3 activation. Nature. 1999 Feb 11;397(6719):534-9.
- [2]. Wei Xia, et al. Damaged brain accelerates bone healing by releasing small extracellular vesicles that target osteoprogenitors. Nat Commun. 2021 Oct 15;12(1):6043.

[3]. Akitoshi Sasamoto, et al. Mechanotransduction by integrin is essential for IL-6 secretion from endothelial cells in response to uniaxial continuous stretch. Am J Physiol Cell Physiol. 2005 May;288(5):C1012-22.

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

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