Cyclo(Arg-Gly-Asp-D-Phe-Cys) TFA

Cat. No.: HY-P2300A

Molecular Formula: $C_{26}H_{35}F_3N_8O_9S$

Molecular Weight: 692.66

Target: Integrin

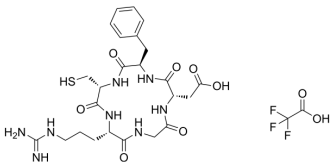
Pathway: Cytoskeleton

Storage: Sealed storage, away from moisture and light, under nitrogen

Powder -80°C 2 years

-20°C 1 year

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



SOLVENT & SOLUBILITY

In Vitro

H_2O : 5 mg/mL (7.22 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	1.4437 mL	7.2185 mL	14.4371 mL
	5 mM	0.2887 mL	1.4437 mL	2.8874 mL
	10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

Cyclo(Arg-Gly-Asp-D-Phe-Cys) (Cyclo RGDfC) TFA, a cyclic RGD peptide which has high affinity to αvβ3, can disrupt cell integrin interactions. Cyclo(Arg-Gly-Asp-D-Phe-Cys) TFA inhibits pluripotent marker expression in embryonic stem cells (ESCs) and the tumorigenic potential of mESCs in vivo. Cyclo(Arg-Gly-Asp-D-Phe-Cys) TFA can be used in the research of tumors[1].

IC_{50} & Target

αvβ3

In Vitro

Cyclo(Arg-Gly-Asp-D-Phe-Cys) TFA (0.5 mM; 24 h) down-regulates the transcription factors Oct 4, Sox 2 and Nanog of mESCs [1].

Cyclo(Arg-Gly-Asp-D-Phe-Cys) TFA (0.5 mM) inhibits integrin gene expression mESC-col I (type I collagen) constructs[1].

Cyclo(Arg-Gly-Asp-D-Phe-Cys) TFA (0.5 mM)-treated mESC leads to the formation of aggregates and detachment from the surface[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Cyclo(Arg-Gly-Asp-D-Phe-Cys) TFA (0.5 mM, 24 h)-treated mESCs in the presence/absence of Leukemia inhibitory factor (LIF)

	(injected in both thighs) generated teratomas in severe combined immunodeficiency (SCID) mice, which indicates that the process of mESC tumor formation in vivo is dependent on integrin interaction[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Hazenbiller O, et al. Reduction of pluripotent gene expression in murine embryonic stem cells exposed to mechanical loading or Cyclo RGD peptide. BMC Cell Biol. 2017 Nov 14;18(1):32.

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