Malantide

Cat. No.: HY-P1597

CAS No.: 86555-35-3

Molecular Formula: $C_{72}H_{124}N_{22}O_{21}$

Molecular Weight: 1633.89

Sequence: Arg-Thr-Lys-Arg-Ser-Gly-Ser-Val-Tyr-Glu-Pro-Leu-Lys-Ile

Sequence Shortening: RTKRSGSVYEPLKI

Target: PKA; PKC

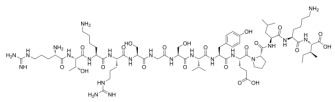
Pathway: Stem Cell/Wnt; Epigenetics; TGF-beta/Smad

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 : 100 mg/mL (61.20 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.6120 mL	3.0602 mL	6.1204 mL
	5 mM	0.1224 mL	0.6120 mL	1.2241 mL
	10 mM	0.0612 mL	0.3060 mL	0.6120 mL

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

BIOLOGICAL ACTIVITY

Description

Malantide is a synthetic dodecapeptide derived from the site phosphorylated by cAMP-dependent protein kinase (PKA) on the β-subunit of phosphorylase kinase. Malantide is a highly specific substrate for PKA with a K_m of 15 μM and shows protein inhibitor (PKI) inhibition >90% substrate phosphorylation in various rat tissue extracts[1]. Malantide is also an efficient substrate for PKC with a K_m of 16 μM[2].

IC_{50} & Target

Km: 15 μM (PKA)[1], 16 μM (PKC)[2], 233 μM (PKG)[1]

In Vitro

The K_m values of Malantide are 15 μM and 223 μM for PKA and PKG, respectively. The V_{max} values are 23.8 units/mg and 6.6 units/mg for for PKA and PKG, respectively[1].

A statistically significant effect of isoprenaline on the activity ratio of guinea-pig heart was only: observed with Malantide[1].

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

REFERENCES

[1]. Murray KJ, et al. Use of a synthetic dodecapeptide (malantide) to measure the cyclic AMP-dependent protein kinase activity ratio in a variety of tissues. Biochem J. 1990 May 1;267(3):703-8.

[2]. Z H Zhao, et al. Characterization of a New Substrate for Protein Kinase C: Assay by Continuous Fluorometric Monitoring and High Performance Liquid Chromatography. Biochem Biophys Res Commun. 1991 May 15;176(3):1454-61.

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