MANS peptide

Cat. No.:	HY-P10218
CAS No.:	479482-23-0
Molecular Formula:	$C_{111}H_{184}N_{30}O_{35}$
Molecular Weight:	2498.83
Sequence:	{Myristic acid-Gly}-Ala-Gln-Phe-Ser-Lys-Thr-Ala-Ala-Lys-Gly-Glu-Ala-Ala-Ala-Glu-Arg-Pro-Gly-Glu-Ala-Ala-Val-Ala
Sequence Shortening:	{Myristic acid-Gly}-AQFSKTAAKGEAAAERPGEAAVA
Target:	PKC
Pathway:	Epigenetics; TGF-beta/Smad
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

MANS peptide is an inhibitor for myristoylated alanine-rich C kinase substrate (MARCKS), which competes with MARCKS in cells for membrane binding, and thus inhibits the stimulation of mucin secretion and tumor metastasis[1].

In Vitro

MANS peptide (0-100 μM, 12-24 h) inhibits migration and invasion of lung cancer cells CL1-0/F3, CL1-5, PC9 and A549 without causing toxicity to normal cells[1].

MANS peptide (0-100 μM, 16 h) inihibits MARCKS phosphorylation and PI3K and AKT phosphorylation, leads to downstream changes in Slug and E-cadherin expression levels, prevents the loss of cell-cell adhesion, alters epithelial-mesenchymal transition (EMT) characteristics of cancer cells, and thus decreases tumor metastasis[1].

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

Cell Viability Assay[1]

Cell Line:	CL1-0/F3, CL1-5 and PC9
Concentration:	0-100 μM
Incubation Time:	12-24 h
Result:	Inhibited migration.

Western Blot Analysis[1]

Cell Line:	CL1-0/F3, CL1-5, PC9 and NHBE
Concentration:	0-100 μM
Incubation Time:	16 h
Result:	Upregulated levels of E-cadherin, downregulated levels of Slug. Suppressed MARCKS phosphorylation and AKT/Slug pathway.

In Vivo

MANS peptide (50 nmol/injection, ip, every 3 days for 6 injection) inhibits tumor metastasis, without affecting tumorigenesis in PC9 xenograft NOD/SCID mice model[1].

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

Animal Model:	NOD/SCID mice model[1]
Dosage:	50 nmol/injection
Administration:	Ip, every 3 days for 6 times
Result:	Suppressed micrometastatic lesions.

REFERENCES

[1]. Chen CH, et al., A peptide that inhibits function of Myristoylated Alanine-Rich C Kinase Substrate (MARCKS) reduces lung cancer metastasis. Oncogene. 2014 Jul 10;33(28):3696-706.

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