

DOTA-LM3

Cat. No.:	HY-P5126
CAS No.:	1192362-32-5
Molecular Formula:	C ₆₉ H ₉₃ ClN ₁₆ O ₁₉ S ₂
Molecular Weight:	1550.16
Sequence:	DOTA-[p-Cl-Phe-cyclo(D-Cys-Tyr-D-4-amino-Phe(carbamoyl)-Lys-Thr-Cys)D-Tyr-NH ₂]
Target:	Somatostatin Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Sealed storage, away from moisture and light 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)

BIOLOGICAL ACTIVITY

Description	DOTA-LM3 is a somatostatin receptor (SSTR) antagonist. LM3 refers to p-Cl-Phe- cyclo(D-Cys-Tyr-D-4-amino-Phe(carbamoyl)-Lys-Thr-Cys)D-Tyr- NH ₂ , as well as a somatostatin antagonist. DOTA-LM3 is often isotopically labeled for tracing tumors in vivo, such as ¹⁷⁷ Lu-DOTA-LM3 and ⁶⁸ Ga-DOTA-LM3. ⁶⁸ Ga-DOTA-LM3 shows favorable biodistribution, high tumor uptake, good tumor retention, and few safety concerns. ¹⁷⁷ Lu-DOTA-LM3 can be used for research in DOTATOC-negative liver metastases, such as pancreatic NET and extensive tumor thrombosis ^{[1][2]} .
In Vitro	¹⁷⁷ Lu-DOTA-LM3 is tolerated. ¹⁷⁷ Lu-DOTA-LM3 in the whole body and in the kidneys, spleen, and metastases, resulting in higher mean absorbed organ and tumor doses ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Zhu W, et al. A prospective randomized, double-blind study to evaluate the diagnostic efficacy of ⁶⁸Ga-NODAGA-LM3 and ⁶⁸Ga-DOTA-LM3 in patients with well-differentiated neuroendocrine tumors: compared with ⁶⁸Ga-DOTATATE. *Eur J Nucl Med Mol Imaging*. 2022 Apr;49(5):1613-1622.

[2]. Baum RP, et al. First-in-Humans Study of the SSTR Antagonist ¹⁷⁷Lu-DOTA-LM3 for Peptide Receptor Radionuclide Therapy in Patients with Metastatic Neuroendocrine Neoplasms: Dosimetry, Safety, and Efficacy. *J Nucl Med*. 2021 Nov;62(11):1571-1581.

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

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