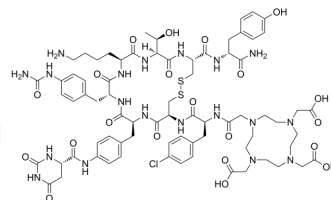


DOTA-JR11

Cat. No.:	HY-P5128
CAS No.:	1039726-31-2
Molecular Formula:	C ₇₄ H ₉₈ ClN ₁₉ O ₂₁ S ₂
Molecular Weight:	1689.27
Sequence:	DOTA-[p-Cl-Phe-cyclo(D-Cys-Phe-D-4-amino-Phe(carbamoyl)-Lys-Thr-Cys)D-Tyr-NH ₂]
Target:	Radionuclide-Drug Conjugates (RDCs); Somatostatin Receptor
Pathway:	Antibody-drug Conjugate/ADC Related; 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)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (14.80 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.5920 mL	2.9599 mL	5.9197 mL
	5 mM	0.1184 mL	0.5920 mL	1.1839 mL
	10 mM	0.0592 mL	0.2960 mL	0.5920 mL

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

BIOLOGICAL ACTIVITY

Description

DOTA-JR11 is a somatostatin receptor 2 (SSTR2) antagonist. DOTA-JR11 can be labeled by ⁶⁸Ga, used for paired imaging in neuroendocrine tumors (NETs) research^[1]. DOTA-JR11 can be used for the synthesis/research of Radionuclide-Drug Conjugates (RDCs).

IC₅₀ & Target

RDC Peptide

In Vitro

[⁶⁸Ga]Ga-DOTA-JR11 (30 ± 5 GBq/μmol, 5-120 min) shows stable uptake in HEK293-SSTR2 cells, suitable for SSTR2-targeted research^[2].

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

In Vivo

[⁶⁸Ga]Ga-DOTA-JR11 (1.85 MBq, i.v., single dose) shows high tumor uptake in HEK293-SSTR2 tumor model mice, suitable for tumor imaging^[2].

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

Animal Model:	HEK293-SSTR2 tumor mice model ^[2]
Dosage:	1.85 MBq
Administration:	Intravenous injection (i.v.), single dose, measured at 5, 30, 60, and 120 min
Result:	Caused tumor uptake to peak at 60 minutes, significantly higher than uptake in other organs.

REFERENCES

[1]. Krebs S, et al. Comparison of ⁶⁸Ga-DOTA-JR11 PET/CT with dosimetric ¹⁷⁷Lu-satoreotide tetraxetan (¹⁷⁷Lu-DOTA-JR11) SPECT/CT in patients with metastatic neuroendocrine tumors undergoing peptide receptor radionuclide therapy. *Eur J Nucl Med Mol Imaging*. 2020 Dec;47(13):3047-3057.

[2]. Xie Q, et al. Synthesis, preclinical evaluation, and a pilot clinical imaging study of [¹⁸F]AlF-NOTA-JR11 for neuroendocrine neoplasms compared with [⁶⁸Ga]Ga-DOTA-TATE. *Eur J Nucl Med Mol Imaging*. 2021 Sep;48(10):3129-3140.

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

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