Data Sheet (Cat.No.T40648)

TargetMol

NOTA

Chemical Properties

CAS No. : 56491-86-2

Formula: C12H21N3O6

Molecular Weight: 303.312

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	NOTA is a multifunctional chelator capable of forming stable complexes with metal ions and is commonly used in radiopharmaceuticals, molecular imaging and targeted nuclear therapy.
Targets(IC50)	Others
In vitro	[^{64}Cu]NOTA-pentixather showed high affinity for CXCR4 in Jurkat T cells (IC_{50} = 14.9 ± 2.1nM) and was efficiently internalized in Chem-1 cells stably expressing human CXCR4 [1].[^{68}Ga]NOTA-RGD showed a high binding affinity for the $\alpha v\beta_3$ integrin (IC_{50} = 27.9±6.8nM) in receptor binding assays, indicating effective targeting of integrin expression associated with angiogenesis[2].
In vivo	In SCID mice bearing Daudi lymphoma, intravenous injection of [^{64}Cu]NOTA-pentixather resulted in high tumor uptake (13.1 ± 1.5% ID/g at 1.5h post-injection), exceeding uptake in all other organs[1].

Solubility Information

Solubility	H2O: 110.00 mg/mL (362.66 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.297 mL	16.4848 mL	32.9696 mL
5 mM	0.6594 mL	3.297 mL	6.5939 mL
10 mM	0.3297 mL	1.6485 mL	3.297 mL
50 mM	0.0659 mL	0.3297 mL	0.6594 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Poschenrieder A, Schottelius M, Osl T, Schwaiger M, Wester HJ. [64Cu]NOTA-pentixather enables high resolution PET imaging of CXCR4 expression in a preclinical lymphoma model. EJNMMI Radiopharm Chem. 2017;2(1):2.
Menichetti L, et al. MicroPET/CT imaging of $\alpha v\beta_3$ integrin via a novel ^{68}Ga-NOTA-RGD peptidomimetic conjugate in rat myocardial infarction. Eur J Nucl Med Mol Imaging. 2013 Aug;40(8):1265-74.