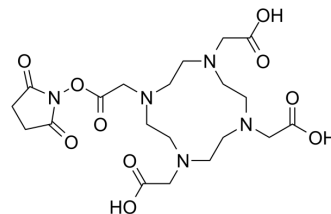


DOTA-NHS-ester

Cat. No.:	HY-128890
CAS No.:	170908-81-3
Molecular Formula:	C ₂₀ H ₃₁ N ₅ O ₁₀
Molecular Weight:	501.49
Target:	ADC Linker
Pathway:	Antibody-drug Conjugate/ADC Related
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (99.70 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		1.9941 mL	9.9703 mL	19.9406 mL
		5 mM		0.3988 mL	1.9941 mL	3.9881 mL
10 mM		0.1994 mL	0.9970 mL	1.9941 mL		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (4.99 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.99 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (4.99 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	DOTA-NHS-ester is a linker for affibody molecules and is applied in small animals PET, SPECT, and CT. DOTA-NHS-ester can be used to label radiotherapeutic agents or imaging probes for the detection of tumors ^[1] .
In Vitro	<p>DOTA-NHS-ester can be used to modify human serum albumin (HSA) to produce DOTA-HSA. And DOTA-HSA is furtherly modified by Sulfo-SMCC (HY-D0975) to obtain DOTA-HSA-SMCC. DOTA-HSA-SMCC is conjugated to ZHER2:342 and the final product is DOTA-HSA-Z_{HER2:342}^[1].</p> <p>In a cell uptake assay, DOTA-HSA-Z_{HER2:342} is labeled by ⁶⁴Cu, ⁶⁴Cu-DOTA-HSA-Z_{HER2:342} (0.5-2 hours) slowly accumulates in the SKOV3 cells and reaches 0.71% of the applied activity at 0.5 h and the uptake increased to 1.58% at 2 h^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

In Vivo

In a microPET images of a mouse bearing SKOV3 tumor, ^{64}Cu -DOTA-HSA-Z_{HER2:342} is injected to the mouse tail. microPET images of a mouse bearing SKOV3 tumor at 1, 4, 24 and 48 h after tail vein injection. The SKOV3 tumor is visible with a low tumor-to-background contrast at 1 h post-injection (p.i.), but with a very good tumor-to-background contrast at 4 and 24 h p.i. Quantification analysis reveals that the SKOV3 tumor uptake values increases with time and are found to be 5.63%, 9.98%, 14.34% and 14.12% ID/g at 1, 4, 24, and 48 h, respectively^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Adv Nanobiomed Res. 2023 Sep 3.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Hoppmann S, et al. Radiolabeled affibody-albumin bioconjugates for HER2-positive cancer targeting. *Bioconjug Chem.* 2011 Mar 16;22(3):413-2

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA