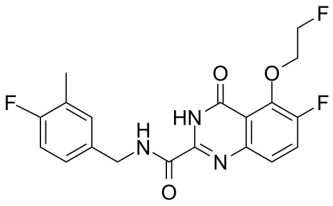
MMP-13-IN-1

Cat. No.:	HY-154868
CAS No.:	2925249-49-4
Molecular Formula:	$C_{19}H_{16}F_3N_3O_3$
Molecular Weight:	391.34
Target:	MMP
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	MMP-13-IN-1 is a potent and selective inhibitor of MMP-13 with a IC_{50} value of 16 nM. MMP-13-in-1 can be used for atherosclerosis research[1].
IC_{50} & Target	MMP13 16 nM (IC_{50})
In Vivo	MMP-13-IN-1 (compound 5j) (2.5 mg/kg; i.v., 15 min before the use of the radiotracer) shows low uptake in metabolic organs with minimal retention of myocardial radioactivity, substantialrenal clearance, and high metabolic stability in ApoE$^{-/-}$ mice models[1]. .MMP-13-IN-1 (compound 5j) (2.5 mg/kg; i.v., 15 min before the use of the radiotracer) displays the highest overall uptake and the greatest colocalization to ORO-positive regions[1].. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	ApoE$^{-/-}$ mice models[1]
Dosage:	2.5 mg/kg
Administration:	Intravenous injection (i.v.); intravenously administered 15 min prior to the radiotracer
Result:	Blood radioactivity continued to decrease between 30 and 60 min and stabilized thereafter. Displayed a significant reduction in liver uptake. Relatively low levels of radioactivity were observed in all other measured organs except for the pancreas and spleen. Resulted in a 23% decrease in aortic plaque uptake , indicating an extent of saturable binding.

REFERENCES

[1]. Buchler A, et al. Quinazoline-2-Carboxamides as Selective PET Radiotracers for Matrix Metalloproteinase-13 Imaging in Atherosclerosis. J Med Chem. 2023 May 25;66(10):6682-6696.

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

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