Product Data Sheet

Product Name: TUG-2304
Cat. No.: GC79201

Chemical Properties

Cas. No.	3034674-48-8		
Formula	$C_{20}H_{20}F_3N_5O_2$	M.Wt	419.4
Solubility	DMSO: 100 mg/mL (238.44 mM; Need ultrasonic)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

TUG-2304 is a highly selective free fatty acid receptor 2 (FFA2, GPR43) antagonist that completely suppresses propionate-induced neutrophil migration and respiratory burst. TUG-2304 is applicable to research related to metabolic and inflammatory diseases [1].

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In Vivo, TUG-2304 (compound 16l) (5-10 mg/kg; i.v., p.o.; single dose) exhibits favorable pharmacokinetic properties in male BALB/cAnC mice, with an oral bioavailability of 44%[1].

In Vitro, TUG-2304 (compound 16l) (1 nM-10 μM) completely inhibits propionate-induced migration of human neutrophils over the concentration range of 1 nM to 10 μM[1]. TUG-2304 (100 pM-10 μM) completely inhibits propionate-induced respiratory burst in human neutrophils, with a pIC50 of 8.24 nM, and its activity is specific to FFA2-mediated activation[1].

References:

[1]. Valentini A, et al. Discovery of Potent Tetrazole Free Fatty Acid Receptor 2 Antagonists. Journal of medicinal chemistry. 2023 May 11;66(9):6105-6121.

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

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