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DATASHEET

FCH-2296413 (Peripherally restricted HCAD DREADD actuator)

Product overview

Name	FCH-2296413 (Peripherally restricted HCAD DREADD actuator)
Cat No	HB13194
Biological action	Activator
Purity	>99%
Description	Novel, selective activator of the peripherally restricted HCAD DREADD. Does not cross the BBB.

Images

Biological Data

Biological description

Novel DREADD actuator for the first peripherally restricted DREADD system named the HCAD DREADD system. This system enables precise study of peripheral physiology without CNS interference.

Unlike other DREADD ligands (e.g. CNO & DCZ), FCH-2296413 does not cross the BBB so is able to selectively activate the peripherally restricted HCAD G_{i} DREADD. To date, relatively few DREADD studies have been conducted in the PNS.

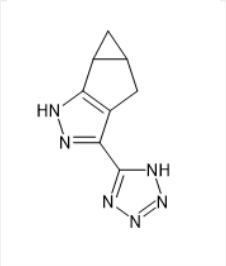
FCH-2296413 has excellent drug-like properties, peripherally restricted pharmacokinetics and clean off-target profiles. The HCAD system has been shown to selectively reduce pain in mice by targeting peripheral tissues of dorsal root ganglion (DRG). Active *in-vivo*. FCH-2296413 is a racemic mixture which includes the racemates AR2599088 ('088) and AR259089 ('089).

FCH-2296413 sodium salt (Peripherally restricted HCAD DREADD actuator) [Water Soluble] also available.

Solubility & Handling

Solubility overview	Soluble in DMSO (100mM)
Storage instructions	-20°C
Storage of solutions	Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.
Shipping Conditions	Stable for ambient temperature shipping. Follow storage instructions on receipt.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	*rac*-(2R,4R)-7-(1H-1,2,3,4-tetrazol-5-yl)-8,9-diazatricyclo[4.3.0.0,2,4]nona-1(6),7-diene
Molecular Weight	188.19
Chemical structure	
Molecular Formula	$C_8H_8N_6$
CAS Number	1229028-63-0
SMILES	C1C2CC3=C(NN=C3C3=NN=NN3)C12
InChi	InChI=1/C8H8N6/c1-3-2-5-6(4(1)3)9-10-7(5)8-11-13-14-12-8/h3-4H,1-2H2,(H,9,10)(H,11,12,13,14)

References

Structure-guided design of a peripherally restricted chemogenetic system.

Kang HJ et al (2024) Cell

PubMedID 39631393