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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

**Storage instructions**  
**Solubility overview**  
**Shipping conditions**  
**Important**

-20°C  
Soluble in DMSO (100mM)  
ambient  
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

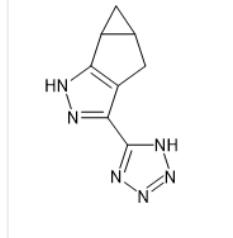
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## Chemical Data

**Chemical name** *rac*-(2*R*,4*R*)-7-(1*H*-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<sub>8</sub>H<sub>8</sub>N<sub>6</sub>

**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)

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## References

**Structure-guided design of a peripherally restricted chemogenetic system.**

Kang HJ et al (2024) Cell

**PubMedID**

[39631393](#)

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