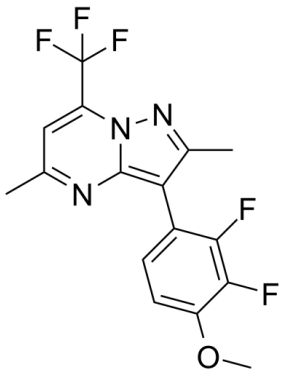
Data Sheet

Product Name:	VU6005649
Cat. No.:	CS-0031100
CAS No.:	2137047-43-7
Molecular Formula:	C16H12F5N3O
Molecular Weight:	357.28
Target:	mGluR
Pathway:	GPCR/G Protein; Neuronal Signaling
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

VU6005649 is a CNS penetrant **$mGlu_{7/8}$ receptor** agonist with **EC_{50}s** of 0.65 μM and 2.6 μM for **$mGlu_7$ receptor** and **$mGlu_8$ receptor**, respectively. IC50 & Target: EC50: 0.65 μM ($mGlu_7$ receptor), 2.6 μM ($mGlu_8$ receptor)[1] **In Vitro:** VU6005649 is a CNS penetrant $mGlu_{7/8}$ receptor agonist with EC_{50}s of 0.65 μM and 2.6 μM for $mGlu_7$ receptor and $mGlu_8$ receptor, respectively. VU6005649 displays a terminal K_p of 2.43 with total brain levels ~9× above the $mGlu_7$ positive allosteric modulator (PAM) in vitro EC_{50}[1]. **In Vivo:** When VU6005649 (compound 9f) is dosed at 30 mg/kg IP in 10% Tween 80/H_2O (0.75 mg/kg. s.c. amphetamine), no efficacy is observed in this assay. VU6005649 shows modest but significant pro-cognitive effects on associative learning in wild-type mice and the first example of efficacy of an $mGlu_{7/8}$ positive allosteric modulator (PAM) in this model[1].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: [1]Tissue distribution studies with VU6005649 (compound 9f) in mice are performed by **formulating VU6005649 in 10% polysorbate 80** and **dosing via intraperitoneal injection** to 20 week old **female C57/Bl6 mice** (3 per time point). At 0.25, 0.5, 1, 3, and 6 hours post dose, animals are euthanized and decapitated, blood is collected via cardiac puncture and the brains are removed, thoroughly washed in cold phosphate-buffered saline, and immediately frozen on dry ice[1].

References:

[1]. Abe M, et al. Discovery of VU6005649, a CNS Penetrant mGlu7/8 Receptor PAM Derived from a Series of Pyrazolo[1,5-a]pyrimidines. ACS Med Chem Lett. 2017 Sep 1;8(10):1110-1115.

CAIndexNames:

Pyrazolo[1,5-a]pyrimidine, 3-(2,3-difluoro-4-methoxyphenyl)-2,5-dimethyl-7-(trifluoromethyl)-

SMILES:

CC1=NN2C(N=C(C)C=C2C(F)(F)F)=C1C3=CC=C(OC)C(F)=C3F

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

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