Product Datasheet

GNE-7915

Catalog No. **BP-02129** · CAS **1351761-44-8** · Form **free base** · Physical state **other** · Color **off-white to light yellow** · Version **1.0** · Revision **2026-09-03**

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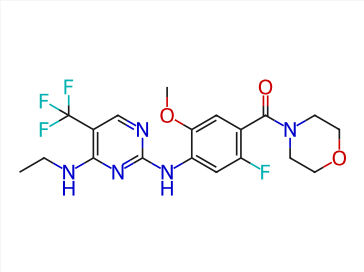
Target	Research area
LRRK2	**Neurological Disease**

Molecular formula	$C_{19}H_{21}F_4N_5O_3$
Molecular weight	**443.3954**

STRUCTURE



DESCRIPTION

GNE-7915 is a potent, selective and brain-penetrant inhibitor of LRRK2 with an IC50 of 9 nM.

BIOLOGICAL ACTIVITY

In Vitro

Maintaining the methoxy/fluoro arrangement at C-2′/C-5′ and varying aminoalkyl R1 substitution resultes in single-digit nanomolar LRRK2 cellular activities for GNE-7915 and compound 19. Expanded Invitrogen kinase profiling (187 kinases) at 0.1 μM for both GNE-7915 (100-fold over LRRK2 Ki) and 19 (250-fold over LRRK2 Ki) resultes in only TTK showing greater than 50% inhibition. Selectivity profiling using the DiscoverX KinomeScan55 competitive binding assay panel, which includes 392 unique kinases, is also performed for GNE-7915 at 0.1 μM. Binding of >50% probe displacement is detected for 10 kinases and of >65% for only LRRK2, TTK, and ALK, further supporting the excellent LRRK2 selectivity for GNE-7915. Cerep receptor profiling, including expanded brain panels, suggestes that GNE-7915 and 19 only inhibite 5-HT2B with >70% inhibition at 10 μM. GNE-7915 and 19 are confirmed to be moderately potent 5-HT2B antagonists in vitro functional assays.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Kavanagh ME, et al. The development of CNS-active LRRK2 inhibitors using property-directed optimisation. Bioorg Med Chem Lett.?2013 Jul 1;23(13):3690-6.

[2]. Estrada AA, et al. Discovery of highly potent, selective, and brain-penetrable leucine-rich repeat kinase 2 (LRRK2) small molecule inhibitors. J Med Chem. 2012 Nov 26;55(22):9416-33.

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