

## Product Data Sheet

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Product Name: GNE-7915 tosylate

Cat. No.: GC36171

### Chemical Properties

Cas. No. 2070015-00-6

SMILES CCNC1=NC(NC2=C(OC)C=C(C(N3CCOCC3)=O)C(F)=C2)=NC=C1C(F)(F)F.CC4=CC=C(S(=O)(O)=O)C=C4

Formula  $C_{26}H_{29}F_4N_5O_6S$  M.Wt 615.6

Solubility DMSO:  $\geq 50$  mg/mL (81.22 mM);  
Water:  $< 0.1$  mg/mL (insoluble) Storage Store at 2-8°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.

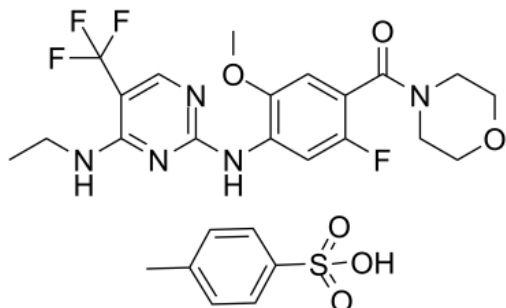
**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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### Structure



### Background

GNE-7915 tosylate is a potent, selective and brain-penetrant inhibitor of LRRK2 with an IC<sub>50</sub> of 9 nM. IC<sub>50</sub>: 9 nM[1] (LRRK2)

Maintaining the methoxy/fluoro arrangement at C-2'/C-5' and varying aminoalkyl R1 substitution results 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) results 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

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expanded brain panels, suggests that GNE-7915 and 19 only inhibit 5-HT<sub>2B</sub> with >70% inhibition at 10  $\mu$ M. GNE-7915 and 19 are confirmed to be moderately potent 5-HT<sub>2B</sub> antagonists in vitro functional assays[2].

[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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