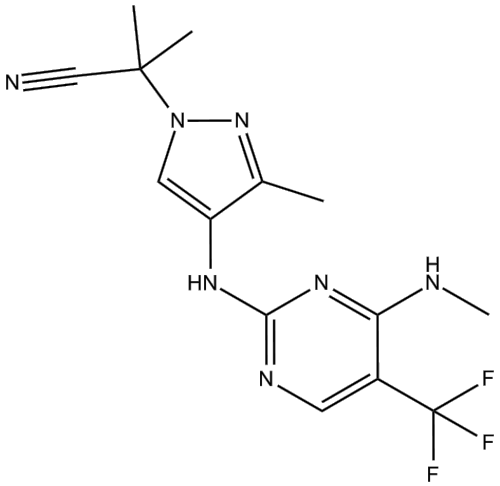
Product Data Sheet

Product Name: GNE0877
Cat. No.: GC15196

Chemical Properties

Cas. No.	1374828-69-9		
Chemical Name	2-methyl-2-(3-methyl-4-((4-(methylamino)-5-(trifluoromethyl)pyrimidin-2-yl)amino)-1H-pyrazol-1-yl)propanenitrile		
SMILES	FC(F)(C1=CN=C(N=C1NC)NC2=CN(C(C)(C#N)C)N=C2C)F		
Formula	$C_{14}H_{16}F_3N_7$	M.Wt	339.32
Solubility	DMF: 30 mg/ml,DMSO: 30 mg/ml,DMSO:PBS (pH 7.2) (1:6): 0.14 mg/ml,Ethanol: 1 mg/ml	Storage	Store at -20°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.		

Structure



Background

Leucine-rich repeat kinase 2 (LRRK2) has drawn significant interest in the neuroscience research community because it is one of the most compelling targets for a potential disease-modifying

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Parkinson's disease therapy. GNE-0877 is a highly potent and selective LRRK2 inhibitors.

In vitro: GNE-0877 showed significantly enhanced LRRK2 cellular potency (3 nM) and low turnover in human liver microsomes and hepatocytes with no evidence of glucuronidation. Invitrogen kinase-selectivity profiling (188 kinases) of GNE-0877 at 0.1 μM resulted in only four kinases showing greater than 50% inhibition and suggested that GNE-0877 is a highly selective LRRK2 inhibitor. Furthermore, GNE-0877 possessed a 212-fold biochemical-selectivity index over TTK (Ki = 150 nM) [1].

In vivo: GNE-0877 was evaluated for its ability to inhibit in vivo LRRK2 Ser1292 autophosphorylation using BAC transgenic mice expressing human LRRK2 protein with the G2019S Parkinson's disease mutation. Using free-drug concentrations, robust concentration-dependent inhibition of Ser1292 autophosphorylation was observed for GNE-0877 [1].

Clinical trials: Currenlty no clinical data are available.

Reference:
[1] Estrada AA, Chan BK, Baker-Glenn C, Beresford A, Burdick DJ, Chambers M, Chen H, Dominguez SL, Dotson J, Drummond J, Flagella M, Fuji R, Gill A, Halladay J, Harris SF, Heffron TP, Kleinheinz T, Lee DW, Le Pichon CE, Liu X, Lyssikatos JP, Medhurst AD, Moffat JG, Nash K, Scearce-Levie K, Sheng Z, Shore DG, Wong S, Zhang S, Zhang X, Zhu H, Sweeney ZK. Discovery of highly potent, selective, and brain-penetrant aminopyrazole leucine-rich repeat kinase 2 (LRRK2) small molecule inhibitors. J Med Chem. 2014 Feb 13;57(3):921-36.

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