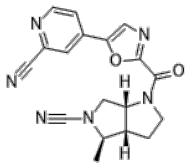
ProbeChem®
Expedite Your Scientific Research

WWW.PROBECHEM.COM

Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	MTX115325
Cat. No.	:	PC-21351
CAS No.	:	2750895-97-5
Molecular Formula	:	$C_{18}H_{16}N_6O_2$
Molecular Weight	:	348.37
Target	:	Deubiquitinase (DUB)
Solubility	:	10 mM in DMSO



CAS: 2750895-97-5

Biological Activity

MTX115325 (MTX325, MTX-325) is a potent, selective, brain-penetrant **USP30** inhibitor with IC50 of 12 nM in biochemical fluorescence polarization assays.
MTX115325 exhibits high selectivity (>2000-fold) against 54 DUBs and other cysteinyl proteases.
MTX115325 blocks access of a ubiquitin-like probe to the enzyme active site in cells with IC50 of 25 nM.
MTX115325 increases ubiquitylation of the outer mitochondrial membrane protein TOM20, a USP30 substrate, with an EC1.5x and EC50 of 10 nM and 32 nM respectively, in human HeLa cell line overexpressing PARKIN and challenged with the mitochondrial toxins antimycin A and oligomycin A (A/O).
MTX115325 treatment (10 nM-1 uM) causes the upregulation of TOM20-ubiquitylation in human dopaminergic neurons in vitro, without any exogenous stimuli.
MTX115325 potently inhibits mouse USP30 with an IC50 of 13 nM, similar to human USP30.
MTX115325 (50 mg/kg BID, oral gavage) prevents dopaminergic neuronal loss and dopamine depletion in an α-synuclein-based PD mouse model.
MTX115325 recapitulates the effects of Usp30 KO in protecting against TH+ neuronal loss and striatal dopamine loss in an αSyn-based PD mouse model.

References

Patent WO 2021/249909 A1.

Fang TZ, et al. ***Nat Commun.*** 2023 Nov 13;14(1):7295.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

E-mail: tech@probechem.com