

DATA SHEET

Product Name: Pridopidine

Catalog #: CV-1030

Alt: CAS # 346688-38-8; 4-(3-(Methylsulfonyl)phenyl)-1-propylpiperidine; ACR16

Molecular Mass: 281.4

Analysis: >98% (HPLC); NMR (conforms)

Supplied As: White powder

Resuspension: May be dissolved in DMSO (10 mg/ml)

Storage: Store desiccated as supplied at -20°C for up to 2 years. Store solutions at -20°C for up to 3 months.

Description:

Potential treatment for Huntington's disease, Parkinson's disease, and schizophrenia^{1,2}. Able to reverse both hypo- and hyperdopaminergia depending on local dopamine concentrations without inducing catalepsy. This was originally attributed to functional dopamine D2 antagonism with fast on/off kinetics ("dopamine stabilizer")³. More recent studies have attributed pridopidine's effects to its being a more potent sigma-1 ligand than a D2 ligand^{4,5}. Displays neuroprotective/restorative effects^{6,7} and ameliorates central features of amyotrophic lateral sclerosis pathology⁸ in a sigma-1-mediated manner.

References:

1. Pettersson, F., et al., (2010) J. Med. Chem., 53 : 2510
2. Natesan, S., et al., (2006) J. Pharmacol. Exp. Ther., 318 : 810
3. Dyhring, T., et al., (2010) Eur. J. Pharmacol., 628 : 19
4. Sahlholm, K., et al., (2015) Psychopharmacology (Berl), 232 : 3443
5. Sahlholm, K., et al., (2013) Mol. Psychiatry, 18 : 12
6. Francardo, V., et al., (2019) Neurotherapeutics, 16 : 465
7. Ryskamp, D., et al., (2017) Neurobiol. Dis., 97(Pt A) : 46
8. Lonescu, A., et al., (2019) Cell Death Dis., 10 : 210

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