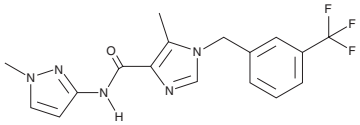
PRODUCT INFORMATION

DUN41875

Item No. 37151

CAS Registry No.:	1295541-87-5
Formal Name:	5-methyl-N-(1-methyl-1H-pyrazol-3-yl)-1-[[3-(trifluoromethyl)phenyl]methyl]-1H-imidazole-4-carboxamide
Synonyms:	SCD1 Inhibitor, Stearyl-CoA Desaturase 1 Inhibitor, Stearoyl-Coenzyme A Desaturase 1 Inhibitor
MF:	$C_{17}H_{16}F_3N_5O$
FW:	363.3
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

DUN41875 is supplied as a solid. A stock solution may be made by dissolving the DUN41875 in the solvent of choice, which should be purged with an inert gas. DUN41875 is soluble in methanol.

Description

DUN41875 is an inhibitor of stearyol-CoA desaturase 1 (SCD1; IC_{50} = 11.8 nM for the rat enzyme).[1] It increases tetramerization of soluble α-synuclein and reduces mutant α-synuclein incorporation into tetramers in BE(2)-M17 neuroblastoma cells expressing a mutant α-synuclein containing three glutamate-to-lysine substitutions at positions 35, 46, and 61 (3K) when used at concentrations of 0.01, 0.1, and 1 µM.[2] DUN41875 (10 or 30 mg/kg) reduces the plasma ratio of oleic acid to stearic acid in rats fed a low essential fatty acid diet.[1] It reduces the time to turn and the number of falls in the pole test, increases time to fall from the rotarod, and improves endurance in the hanging wire test in the 3K-3798 transgenic mouse model of Parkinson's disease when administered in the drinking water at a concentration of 1.9% (v/v).[2] DUN41875 reduces cortex somatic aggregates of phosphorylated α-synuclein and cortex levels of lysosome-associated membrane protein 1 (LAMP-1), also known as CD107a, in the brains from the same mice.

References

1. Atkinson, K.A., Beretta, E.E., Brown, J.A., *et al.* *N*-Benzylimidazole carboxamides as potent, orally active stearoylCoA desaturase-1 inhibitors. *Bioorg. Med. Chem. Lett.* **21(6)**, 1621-1625 (2011).
2. Nuber, S., Nam, A.Y., Rajsombath, M.M., *et al.* A stearoyl-coenzyme A desaturase inhibitor prevents multiple Parkinson disease phenotypes in α-synuclein mice. *Ann. Neurol.* **89(1)**, 74-90 (2021).

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