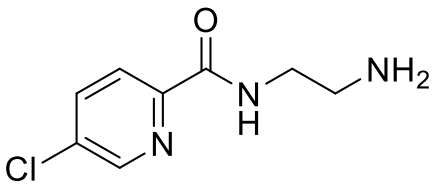
Product data sheet

MedKoo Cat#: 525429 Name: Lazabemide free base CAS: 103878-84-8 (free base) Chemical Formula: $C_8H_{10}ClN_3O$ Exact Mass: 199.0512 Molecular Weight: 199.638	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Lazabemide is a reversible and selective inhibitor of monoamine oxidase B (MAO-B). Lazabemide is potentially an antiparkinsonian agent.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	5.0	25.05

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	5.01 mL	25.05 mL	50.09 mL
5 mM	1.00 mL	5.01 mL	10.02 mL
10 mM	0.50 mL	2.50 mL	5.01 mL
50 mM	0.10 mL	0.50 mL	1.00 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Mason RP, Olmstead EG, Jacob RF. Antioxidant activity of the monoamine oxidase B inhibitor lazabemide. Biochem Pharmacol. 2000 Sep 1;60(5):709-16. doi: 10.1016/s0006-2952(00)00374-9. PMID: 10927030.
2. Guimarães JT, Soares-da-Silva P. The activity of MAO A and B in rat renal cells and tubules. Life Sci. 1998;62(8):727-37. doi: 10.1016/s0024-3205(97)01171-5. PMID: 9489509.

In vivo study

1. Suzuki T, Akaike N, Ueno K, Tanaka Y, Himori N. MAO inhibitors, clorgyline and lazabemide, prevent hydroxyl radical generation caused by brain ischemia/reperfusion in mice. Pharmacology. 1995 Jun;50(6):357-62. doi: 10.1159/000139304. PMID: 7568334.
2. Saura J, Kettler R, Da Prada M, Richards JG. Quantitative enzyme radioautography with 3H-Ro 41-1049 and 3H-Ro 19-6327 in vitro: localization and abundance of MAO-A and MAO-B in rat CNS, peripheral organs, and human brain. J Neurosci. 1992 May;12(5):1977-99. doi: 10.1523/JNEUROSCI.12-05-01977.1992. PMID: 1578281; PMCID: PMC6575899.

7. Bioactivity
Biological target:

Lazabemide (Ro 19-6327) is a selective, reversible inhibitor of monoamine oxidase B (MAO-B) (IC_{50}=0.03 μM) but less active for MAO-A (IC_{50}>100 μM).

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In vitro activity

Under physiologic-like conditions, lazabemide inhibited lipid peroxidation in a highly concentration-dependent manner. At low, pharmacologic levels of lazabemide (100.0 nM), there was a significant ($P < 0.001$) and catalytic reduction in lipid peroxide formation, as compared with control samples. The antioxidant activity of lazabemide was significantly more effective than that of either vitamin E or the MAO-B inhibitor, selegiline.

Reference: Biochem Pharmacol. 2000 Sep 1;60(5):709-16. https://pubmed.ncbi.nlm.nih.gov/10927030/

In vivo activity

The ischemia reperfusion-induced hydroxyl radical generation was attenuated by 3 mg/kg of clorgyline and lazabemide. Furthermore, mice pretreated with these MAO inhibitors showed decreased DOPAC levels in comparison with those of their respective vehicle-treated control groups; recovery of the reduced DOPAC level was also delayed.

Reference: Pharmacology. 1995 Jun;50(6):357-62. https://pubmed.ncbi.nlm.nih.gov/7568334/