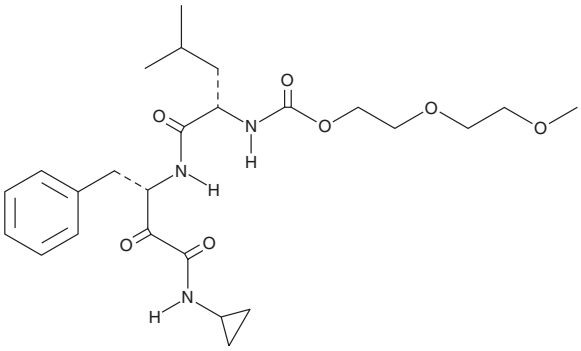
# PRODUCT INFORMATION

## SNJ-1945

*Item No. 46557*

| | |
|---|---|
| **CAS Registry No.:** | 854402-59-8 |
| **Formal Name:** | N-[(1S)-1-[[[(1S)-3-(cyclopropylamino)-2,3-dioxo-1-(phenylmethyl)propyl]amino] carbonyl]-3-methylbutyl]-carbamic acid, 2-(2 methoxyethoxy)ethyl ester |
| **Synonym:** | Mitucapistat |
| **MF:** | $C_{25}H_{37}N_3O_7$ |
| **FW:** | 491.6 |
| **Purity:** | ≥95% |
| **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

SNJ-1945 is supplied as a solid. A stock solution may be made by dissolving the SNJ-1945 in the solvent of choice, which should be purged with an inert gas. SNJ-1945 is paringly soluble (1-10 mg/ml) in ethanol and DMSO.

### Description

SNJ-1945 is a calpain inhibitor ($IC_{50}$s = 0.17 and 0.099 µM for µ-calpain/calpain-1 and m-calpain/calpain-2, respectively).[1] It inhibits proteolysis of the calpain substrate α-spectrin in rat, monkey, and human retinal soluble protein preparations at 100 µM.[2] Oral administration of SNJ-1945 (120 and 240 mg/kg) reduces retinal degeneration in a rat model of ocular hypertension. It reduces COX-2 and caspase-1 levels and increases viability in SH-SY5Y cell models of experimental parkinsonism at 100 and 250 µM.[3] It also reduces the generation of reactive oxygen species (ROS) in SH-SY5Y cells in an *in vitro* parkinsonism model.

### References


1. Shirasaki, Y., Miyashita, H., Yamaguchi, M., *et al.* Exploration of orally available calpain inhibitors: Peptidyl α-ketoamides containing an amphiphile at P3 site. *Bioorg. Med. Chem.* **13(14),** 4473-4484 (2005).
2. Oka, T., Walkup, R.D., Tamada, Y., *et al.* Amelioration of retinal degeneration and proteolysis in acute ocular hypertensive rats by calpain inhibitor ((1S)-1-((((1S)-1-benzyl-3-cyclopropylamino-2,3-di-oxopropyl) amino)carbonyl)-3-methylbutyl)carbamic acid 5-methoxy-3-oxapentyl ester. *Neuroscience* **141(4),** 2139-2145 (2006).
3. Knaryan, V.H., Samantaray, S., Park, S., *et al.* SNJ-1945, a calpain inhibitor, protects SH-SY5Y cells against $MPP^+$ and rotenone. *J. Neurochem.* **130(2),** 280-290 (2014).



**WARNING**
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**
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