

Store at
-20°C
#10727**MDL-28170 (Calpain Inhibitor III)**

5 mg


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For Research Use Only. Not for Use in Diagnostic Procedures.**Background**

MDL-28170 (Calpain Inhibitor III) is a potent and selective inhibitor of Calpain-1 (mu-type) and Calpain-2 (M-type) (1). This cell-permeable small molecule has been shown to cross the blood-brain barrier and has demonstrated neuroprotective effects in several rodent models making it a useful tool for studying neurodegenerative disease and neurotrauma as well as ischemic reperfusion (2,3). MDL-28170 (Calpain Inhibitor III) has an EC₅₀ value of 14 μM when tested in a cell-based assay and has shown to be an effective antiviral agent, inhibiting SARS-CoV replication in Vero 76 cells with an IC₅₀ value of 10 μM (4,5).

Molecular FormulaC₂₂H₂₆N₂O₄**Molecular Weight**

382.5 g/mol

Purity

>98%

CAS

88191-84-8

Solubility

Soluble in DMSO at 75 mg/ml.

Storage

Store lyophilized at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 1 month to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use

MDL-28170 (Calpain Inhibitor III) is supplied as a lyophilized powder. For a 10 mM stock, reconstitute 5 mg of powder in 1.30 ml of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References

1. Mehdi, S. (1991) *Trends Biochem Sci* 16, 150-3.
2. Thompson, S.N. et al. (2010) *J Neurotrauma* 27, 2233-43.
3. Urthaler, F. et al. (1997) *Cardiovasc Res* 35, 60-7.
4. Seyb, K.I. et al. (2008) *J Biomol Screen* 13, 870-8.
5. Barnard, D.L. et al. (2004) *Antivir Chem Chemother* 15, 15-22.

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