

# Product data sheet



MedKoo Cat#: 341187 Name: B355252 CAS#: 1261576-81-1 Chemical Formula: C <sub>25</sub> H <sub>24</sub> ClN <sub>3</sub> O <sub>3</sub> S <sub>2</sub> Exact Mass: 513.0948 Molecular Weight: 514.06	
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:

B355252 is a neuroprotective agent that potentiates nerve growth factor (NGF)-induced neurite outgrowth and protects against cell death caused by glutamate-evoked oxidative stress.

## 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
DMF	30.0	58.36
DMSO	30.0	58.36
DMSO:PBS (pH 7.2) (1:4)	0.20	0.39

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.95 mL	9.73 mL	19.45 mL
5 mM	0.39 mL	1.95 mL	3.89 mL
10 mM	0.19 mL	0.97 mL	1.95 mL
50 mM	0.04 mL	0.19 mL	0.39 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

- Chimeh U, Zimmerman MA, Gilyazova N, Li PA. B355252, A Novel Small Molecule, Confers Neuroprotection Against Cobalt Chloride Toxicity In Mouse Hippocampal Cells Through Altering Mitochondrial Dynamics And Limiting Autophagy Induction. *Int J Med Sci.* 2018 Sep 7;15(12):1384-1396. doi: 10.7150/ijms.24702. PMID: 30275767; PMCID: PMC6158673.
- Gliyazova NS, Ibeanu GC. The Chemical Molecule B355252 is Neuroprotective in an In Vitro Model of Parkinson's Disease. *Cell Mol Neurobiol.* 2016 Oct;36(7):1109-22. doi: 10.1007/s10571-015-0304-5. Epub 2015 Dec 9. PMID: 26649727.

### In vivo study

- Wang HK, Chen JS, Hsu CY, Su YT, Sung TC, Liang CL, Kwan AL, Wu CC. A Novel NGF Receptor Agonist B355252 Ameliorates Neuronal Loss and Inflammatory Responses in a Rat Model of Cerebral Ischemia. *J Inflamm Res.* 2021 Jun 1;14:2363-2376. doi: 10.2147/JIR.S303833. PMID: 34103967; PMCID: PMC8179829.

## 7. Bioactivity

Biological target: B355252 is a neuroprotective agent potentiating nerve growth factor (NGF)-induced neurite outgrowth.

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## In vitro activity

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B355252 protected HT22 neurons against 6-OHDA toxin-induced neuronal cell death by significant attenuation of ROS production, blocking of mitochondrial depolarization, inhibition of cytochrome c release, sequestration of  $[Ca^{2+}]_i$ , modulation of JNK cascade, and strong inhibition of caspase 3/7 cleavage. Overall, the data demonstrates that death of neurons under toxic conditions characteristic of Parkinson's Disease can be efficiently halted by B355252.

Reference: Cell Mol Neurobiol. 2016 Oct;36(7):1109-22. <https://link.springer.com/article/10.1007/s10571-015-0304-5>

## In vivo activity

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B355252 protected ischemic neurons from neuronal loss by attenuating DNA damage, reducing ROS production and the LDH level, and preventing neuronal apoptosis. Moreover, inflammatory responses in astrocytic and microglial gliosis, as well as IL-1 $\beta$  and TNF- $\alpha$  levels, were ameliorated. Consequently, the behavioral outcomes of ischemic rats in neurologic responses and fore paw function recovery were improved.

Reference: J Inflamm Res. 2021 Jun 1;14:2363-2376. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8179829/>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*