

Product data sheet



MedKoo Cat#: 412190 Name: BXT-51072 CAS: 173026-17-0 Chemical Formula: C ₁₀ H ₁₃ NSe Exact Mass: 227.0213 Molecular Weight: 226.181	
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:

BXT 51072, also known as ALT-2074, belongs to a class of drugs called "glutathione peroxidase mimics." BXT-51072 works by imitating a substance produced in various tissues in the body, which prevents damage of the heart and blood vessels. The intraocular injection of BXT-51072 protected axotomized neurons at doses in a narrow (tenfold) range. It also reduced the deleterious effects of intraocular tert-butyl hydroperoxide, an inducer of lipid peroxidation, and diminished the excitotoxic degeneration induced by N-methyl-D-aspartate. However, BXT-51072 did not noticeably reduce naturally occurring cell death.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.42 mL	22.11 mL	44.21 mL
5 mM	0.88 mL	4.42 mL	8.84 mL
10 mM	0.44 mL	2.21 mL	4.42 mL
50 mM	0.09 mL	0.44 mL	0.88 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

- Gosgnach W, Messika-Zeitoun D, Gonzalez W, Philipe M, Michel JB. Shear stress induces iNOS expression in cultured smooth muscle cells: role of oxidative stress. *Am J Physiol Cell Physiol*. 2000 Dec;279(6):C1880-8. doi: 10.1152/ajpcell.2000.279.6.C1880. PMID: 11078703.
- Moutet M, d'Alessio P, Malette P, Devaux V, Chaudière J. Glutathione peroxidase mimics prevent TNFalpha- and neutrophil-induced endothelial alterations. *Free Radic Biol Med*. 1998 Aug;25(3):270-81. doi: 10.1016/s0891-5849(98)00038-0. PMID: 9680172.

In vivo study

- Blum S, Asaf R, Guetta J, Miller-Lotan R, Asleh R, Kremer R, Levy NS, Berger FG, Aronson D, Fu X, Zhang R, Hazen SL, Levy AP. Haptoglobin genotype determines myocardial infarct size in diabetic mice. *J Am Coll Cardiol*. 2007 Jan 2;49(1):82-7. doi: 10.1016/j.jacc.2006.08.044. Epub 2006 Dec 13. PMID: 17207726.
- Castagné V, Clarke PG. Neuroprotective effects of a new glutathione peroxidase mimetic on neurons of the chick embryo's retina. *J Neurosci Res*. 2000 Feb 15;59(4):497-503. doi: 10.1002/(SICI)1097-4547(20000215)59:4<497::AID-JNR4>3.0.CO;2-B. PMID: 10679788.

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7. Bioactivity

Biological target:

BXT 51072, also known as ALT-2074, belongs to a class of drugs called "glutathione peroxidase mimics."

In vitro activity

The two compounds that have the highest GPx activity, BXT-51072 and BXT-51077, were shown to be the most efficient inhibitors of leukocyte recruitment by human umbilical vein endothelial cells (HUVEC), upon incubation with neutrophils (10-fold excess over HUVEC) and with 1 ng/ml TNF-alpha for 1 or 3.5 h.

Reference: Free Radic Biol Med. 1998 Aug;25(3):270-81. <https://pubmed.ncbi.nlm.nih.gov/9680172/>

In vivo activity

Administration of an antioxidant (BXT-51072) to Hp 2 mice reduced myocardial injury after IR by more than 80% (p = 0.003), but no myocardial protection was provided by the antioxidant to Hp 1 mice.

Reference: J Am Coll Cardiol. 2007 Jan 2;49(1):82-7. <https://pubmed.ncbi.nlm.nih.gov/17207726/>

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.