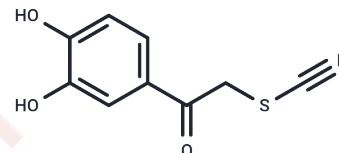


BiP inducer X

Chemical Properties

CAS No. :	101714-41-4
Formula:	C ₉ H ₇ NO ₃ S
Molecular Weight:	209.22
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	BiP inducer X (BIX) is a selective inducer of immunoglobulin heavy chain binding protein (BiP)/GRP78 and an ER chaperone inducer. BiP inducer X prevents cell death in neurons and retinal cell lines.
Targets(IC50)	Apoptosis
In vitro	Pretreatment of BiP inducer X (5µM; 12 hours) inhibits cell death induced by ER stress involving inhibited activation of caspases 3/7 and 4. In SK-N-SH cells, BiP inducer X (5 µM; 0-12 hours) increases BiP protein and is mediated by activation of ER stress response elements (ERSEs) through the ATF6 pathway[1].
In vivo	In male adult ddY mice, BiP inducer X (20µg) reduces ER stress-induced apoptosis induced in the penumbra by MCA occlusion. BiP inducer X reduces the insults due to cerebral infarction[1].

Solubility Information

Solubility	DMSO: 45 mg/mL (215.08 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 2 mg/mL (9.56 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.7797 mL	23.8983 mL	47.7966 mL
5 mM	0.9559 mL	4.7797 mL	9.5593 mL
10 mM	0.478 mL	2.3898 mL	4.7797 mL
50 mM	0.0956 mL	0.478 mL	0.9559 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Kudo T, Kanemoto S, Hara H, Morimoto N, Morihara T, Kimura R, Tabira T, Imaizumi K, Takeda M. A molecular chaperone inducer protects neurons from ER stress. *Cell Death Differ.* 2008 Feb;15(2):364-75. Epub 2007 Nov 30. PubMed PMID: 18049481.

Oida Y, Izuta H, Oyagi A, Shimazawa M, Kudo T, Imaizumi K, Hara H. Induction of BiP, an ER-resident protein, prevents the neuronal death induced by transient forebrain ischemia in gerbil. *Brain Res.* 2008 May 7;1208:217-24. doi: 10.1016/j.brainres.2008.02.068. Epub 2008 Mar 4. PubMed PMID: 18395193.

Inokuchi Y, Nakajima Y, Shimazawa M, Kurita T, Kubo M, Saito A, Sajiki H, Kudo T, Aihara M, Imaizumi K, Araie M, Hara H. Effect of an inducer of BiP, a molecular chaperone, on endoplasmic reticulum (ER) stress-induced retinal cell death. *Invest Ophthalmol Vis Sci.* 2009 Jan;50(1):334-44. doi: 10.1167/iovs.08-2123. Epub 2008 Aug 29. PubMed PMID: 18757512.

Inokuchi Y, et al. Effect of an inducer of BiP, a molecular chaperone, on endoplasmic reticulum (ER) stress-induced retinal cell death. *Invest Ophthalmol Vis Sci.* 2009 Jan;50(1):334-44.

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