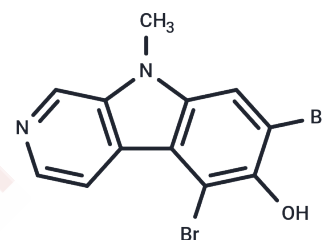


MBED

Chemical Properties

CAS No. :	123363-40-6
Formula:	C ₁₂ H ₈ Br ₂ N ₂ O
Molecular Weight:	356.01
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	MBED represents a highly specialized synthetic small molecule specifically engineered to modulate the calcium homeostasis within striated muscle fibers by acting as a potent allosteric enhancer of the ryanodine receptor type 1 channel while simultaneously exerting inhibitory effects on the sarcoplasmic reticulum calcium ATPase activity, effectively facilitating the measurable elevation of cytosolic calcium concentrations across various preclinical experimental models to evaluate the disruption of intracellular signaling during strictly monitored laboratory observation periods.
Targets(IC50)	Others
In vitro	In RyR1-expressing cell models and SR vesicles, MBED increased the open probability of RyR1 channels and inhibited SERCA1-mediated calcium sequestration with IC50 values of 10-30 uM [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8089 mL	14.0445 mL	28.0891 mL
5 mM	0.5618 mL	2.8089 mL	5.6178 mL
10 mM	0.2809 mL	1.4045 mL	2.8089 mL
50 mM	0.0562 mL	0.2809 mL	0.5618 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

- Diaz-Sylvester PL, et al. Eudistomin D and penaresin derivatives as modulators of ryanodine receptor channels and sarcoplasmic reticulum Ca²⁺ ATPase in striated muscle. *Mol Pharmacol*. 2014 Apr;85(4):564-75.
- Mirko Vukcevic, et al. Downstream Effects of a RyR1 Mutation Linked to Malignant Hyperthermia on the Phenotypic and Functional Characteristic of Dendritic Cells. Volume 102, Issue 3, Supplement 1307a January 31, 2012.
- Jehl P, Sievers F, Higgins DG. OD-seq: outlier detection in multiple sequence alignments. *BMC Bioinformatics*. 2015 Aug 25;16:269. doi: 10.1186/s12859-015-0702-1. PubMed PMID: 26303676; PubMed Central PMCID: PMC4548304.
- Diaz-Sylvester PL, Porta M, Juettner VV, Lv Y, Fleischer S, Copello JA. Eudistomin D and penaresin derivatives as modulators of ryanodine receptor channels and sarcoplasmic reticulum Ca²⁺ ATPase in striated muscle. *Mol Pharmacol*. 2014 Apr;85(4):564-75. doi: 10.1124/mol.113.089342. Epub 2014 Jan 14. PubMed PMID: 24423447; PubMed Central PMCID: PMC3965891.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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