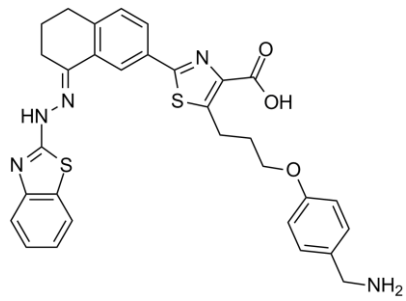
Product Name: WEHI-539

Revision Date: 6/30/2016

Product Data Sheet

Chemical Properties



Product Name: WEHI-539

Cas No.: 1431866-33-9

M.Wt: 583.72

Formula: C31H29N5O3S2

Synonyms: WEHI539,WEHI 539

Chemical Name: 5-[3-[4-(aminomethyl)phenoxy]propyl]-2-[(8E)-8-(1,3-benzothiazol-2-ylhydrazinylidene)-6,7-dihydro-5H-naphthalen-2-yl]-1,3-thiazole-4-carboxylic acid

Canonical SMILES: C1CC2=C(C=C(C=C2)C3=NC(=C(S3)CCCOC4=CC=C(C=C4)CN)C(=O)O)C(=NNC5=NC6=CC=CC=C6S5)C1

Solubility: Soluble in DMSO

Storage: Store at -20°C

General tips: For obtaining a higher solubility , please warm the tube at 37° C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20° C for several months.

Shopping Condition: Evaluation sample solution : ship with blue ice
All other available size: ship with RT , or blue ice upon request

Biological Activity

Targets : Bcl-xL

Pathways: Apoptosis >> Bcl-xL

Description:

WEHI-539 is a small-molecule inhibitor of BCL XLwith an IC50 value of 1.1 nM [1].
WEHI-539 was designed as a BCL-XLinhibitor with high affinity. It interacted the with the binding groove of BCL-XLwith a Kd value of 0.6 nM. In MEF cells lacking MCL-1, WEHI-539 induced apoptosis which was evidenced by the release of mitochondrial cytochrome cand caspase-3 processing. In BCL-XLoverexpressed MEF cells, WEHI-539 showed EC50 value of 0.48 μM.

WEHI-539 also significantly induced apoptosis of the platelets purified from mice. Besides that, WEHI-539can not kill MEF cells lacking BAK because the cell death mediator BAK is regulated by BCL-XLand MCL-1. [1].

***Reference**:*
[1] Lessene G, Czabotar P E, Sleebs B E, et al. Structure-guided design of a selective BCL-XL inhibitor. Nature chemical biology, 2013, 9(6): 390-397.

Protocol

Cell experiment:

Cell lines	Human colon cancer cell
Preparation method	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.
Reacting conditions	1 μM, 24h
Applications	Limiting dilution analysis with CSCs that were pre-treated with ABT-737, ABT-199 or WEHI-539 revealed that ABT-737 and WEHI-539 both were sufficient to decrease clonogenic capacity, whereas ABT-199 did not affect clonogenic growth. As WEHI-539 is selective for BCLXL, this points to a dependency of CSCs on BCLXL for survival. Importantly, ABT-737- or WEHI-539-induced loss of clonogenicity could be restored when BCLXL was ectopically overexpressed. When spheroid cultures were treated with ABT-737 or WEHI-539 compounds, CSCs were effectively sensitized toward oxaliplatin and other chemotherapeutic agents.

***Reference**:*
1. Colak S, Zimberlin CD, Fessler E et al. Decreased mitochondrial priming determines chemoresistance of colon cancer stem cells. Cell Death Differ. 2014 Jul;21(7):1170-7.

Product Citations

1. Bennett A, Sloss O, et al. "Inhibition of Bcl-xL sensitizes cells to mitotic blockers, but not mitotic drivers." Open Biol. 2016 Aug;6(8). PMID:27512141
2. Winter PS, et al. "RAS signaling promotes resistance to JAK inhibitors by suppressing BAD-mediated apoptosis." Sci Signal. 2014 Dec 23. PMID:25538080

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

ApexBio Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com