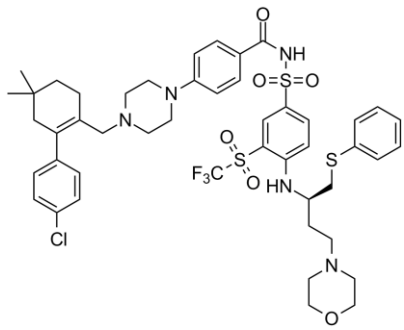
Product Name: ABT-263 (Navitoclax)

Revision Date: 6/30/2016

Product Data Sheet

Chemical Properties



Product Name: ABT-263 (Navitoclax)

Cas No.: 923564-51-6

M.Wt: 974.61

Formula: C47H55ClF3N5O6S3

Synonyms: Navitoclax,ABT-263,ABT263,ABT 263

Chemical Name: (R)-4-(4-((4'-chloro-4,4-dimethyl-3,4,5,6-tetrahydro-[1,1'-biphenyl]-2-yl)methyl)piperazin-1-yl)-N-((4-((4-morpholino-1-(phenylthio)butan-2-yl)amino)-3-((trifluoromethyl)sulfonyl)phenyl)sulfonyl)benzamide

Canonical SMILES: CC(CC1)(C)CC(CN2CCN(C3=CC=C(C(NS(C4=CC=C(N[C@@H](CSC5=CC=CC=C5)CCN6CCOCC6)C(S(C(F)(F)F)(=O)=O)=C4)(=O)=O)=O)C=C3)CC2)=C1C7=CC=C(Cl)C=C7

Solubility: >48.7mg/mL in DMSO

Storage: Desiccate 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-2 Family

Pathways: Apoptosis >> Bcl-2 Family

Description:

ABT-263 is an orally sellecitive inhibitor of B-cell leukemia 2 (Bcl-2) family of proteins with potential antineoplastic activity. ABT-263 is a small molecular with the formula of C47H55ClF3N5O6S3 and Molecular Weight of 974. As a Bad-like Bh3 minetic, ABT-263 binds to

Bcl-2 family proteins Bcl-2, Bcl-xl and Bcl-w, disrupts the interaction between Bcl-2/Bcl-xl /Bcl-w and pro-apoptotic proteins such as Bim, Bad and Bak, which trigger the caspases-initiated cell death pathway to induce apoptosis.

***Reference**:*
1. Tse et al., ABT-263: A Potent and Orally Bioavailable Bcl-2 Family Inhibitor. Cancer Res. 2008, 68, 3421-3428.
2. Shoemaker et al., Activity of the Bcl-2 Family Inhibitor ABT-263 in a Panel of Small Cell Lung Cancer Xenograft Models. Clin. Cancer Res. 2008, 14, 3268-3277

Protocol

Cell experiment:

Cell lines	Murine DO11.10 T-hybridoma cells expressing murine Bcl-2, Bcl-xL and Bcl-w proteins
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	None specifc suggestion
Applications	ABT-263 is an antitumor effector in preclinical and early clinical studies. It binds to Bcl-2, Bcl-xL, and Bcl-w in vitro, but only targets Bcl-2 in vivo. In human non-Hodgkin lymphomas, high expression of Bcl-2 sensitized to ABT-263 elevated proapoptotic Bim.

Animal experiment [3]:

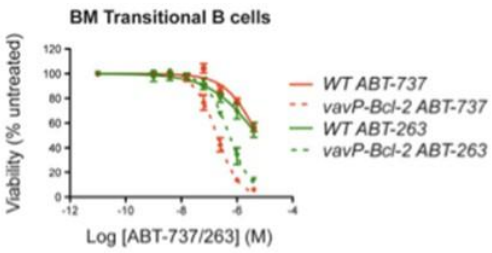
Animal models	Immune-deficient NOD/SCID or NOD/SCID, ILγ receptor negative mice
Dosage form	Orally taken at 100 mg/kg/day for 21 days
Applications	ABT-263 can largely inhibited the activity of patient-derived pediatric acute lymphoblastic leukemia xenograft. ABT-263 sensitivity was correlated with low MCL1 mRNA expression levels. BH3 profiling revealed that resistance to ABT-263 correlated with mitochondrial priming by NOXA peptide.
Other notes	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Reference:
1. Mérino D1, Khaw SL, Glaser SP et al. Bcl-2, Bcl-x(L), and Bcl-w are not equivalent targets of ABT-737 and navitoclax (ABT-263) in lymphoid and leukemic cells.Blood. 2012 Jun 14;119(24):5807-16.
2. Suryani S, Carol H, Chonghaile TN et al. Cell and Molecular Determinants of In Vivo Efficacy of the BH3 Mimetic ABT-263 against Pediatric Acute Lymphoblastic Leukemia Xenografts. Clin Cancer Res. 2014 Jul 10.

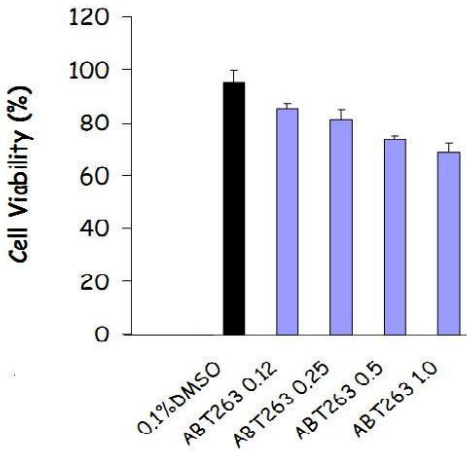
Product Citations

1. Jubierre, L., et al. "BRG1/SMARCA4 is essential for neuroblastoma cell viability through modulation of cell death and survival pathways." Oncogene (2016). PMID:26996667

Product Validation



ABT-737, or ABT-263 at the indicated doses for 24 hours. Survival data are shown for transitional B cells (n = 3 mice for each genotype) and are the results of 3 independent experiments, each performed in triplicate. Experiments depicted in panels C and D were performed concurrently. Values represent mean ± SEM.



As an inhibitor of Bcl-2, ABT263 is effective to reduce cell viability in HG3-CLL cells. Incubating the cells with ABT263 in 96 well plates (3×104 cells per well) for 24h shows a dose-dependent inhibition of cell viability with EC50 value of 2μM.[Source: Istituto di Scienze dell' Alimentazione]

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.

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