### ABT-263 (Navitoclax) Datasheet

**Molecular Weight (MW):** 974.61

**Formula:** C_{47}H_{52}ClF_{3}N_{2}O_{8}S_{3}

**CAS No.:** 923564-51-6

**Synonyms:** N/A

**Solubility (25°C):**
- **DMF:** 195 mg/mL
- **Water:** < 1 mg/mL
- **Ethanol:** < 1 mg/mL

**Storage:**
- 2 years at -20°C
- Powder
- 2 weeks at 4°C in DMSO
- 6 months at -80°C in DMSO

**Biological Activity**

<table>
<thead>
<tr>
<th>Description</th>
<th>ABT-263 (Navitoclax) is a potent inhibitor of Bcl-xL, Bcl-2 and Bcl-w with IC_{50}s of ≤ 0.5 nM, ≤ 1 nM and ≤ 1 nM, respectively.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targets</td>
<td>Bcl-xL, Bcl-2, Bcl-w</td>
</tr>
<tr>
<td>IC_{50}</td>
<td>≤ 0.5 nM (K_{i}) ≤ 1 nM (K_{i}) ≤ 1 nM (K_{i})[1]</td>
</tr>
</tbody>
</table>

**In vitro**

ABT-263 is structurally related to ABT-737; it is a disruptor of Bcl-2/Bcl-xL interactions with pro-apoptotic proteins. Overexpression of the prosurvival Bcl-2 family members is commonly associated with tumor maintenance, progression, and chemoresistance.[1] ABT-263 displays the protection afforded by overexpression of Bcl-2 or Bcl-xL, with EC_{50} values of 60 nM and 20 nM, respectively.[1] A wide range of cellular activity is observed with ABT-263 having a 50% growth inhibition (EC_{50}) of 110 nM against the most sensitive line (H146), whereas its activity in the least sensitive line (H82) results in an EC_{50} at 22 μM. All four cell lines with EC_{50} values of ≤ 400 nM (H146, H889, H963, and H1417) are also highly sensitive to ABT-737, and the two most resistant lines (H1048 and H82) are similarly resistant to ABT-263.[2]

**In vivo**

When ABT-263 is administered at 100 mg/kg/day in the H345 xenograft model, significant antitumor efficacy is observed with 80% TGI and 20% of treated tumors indicating at least a 50% reduction in tumor volume.[2] Oral administration of ABT-263 alone causes complete tumor regressions in xenograft models of small-cell lung cancer and acute lymphoblastic leukemia. In xenograft models of aggressive B-cell lymphoma and multiple myeloma where ABT-263 displays modest or no single agent activity, it significantly enhances the efficacy of clinically relevant therapeutic regimens.[2]

**Clinical Trials**

ABT-263 is currently in Phase II clinical trial for the treatments of chronic lymphocytic leukemia.

**Features**

**Protocol (Only for Reference)**

**Kinase Assay:**[1]

**Affinity determination**

Binding affinities (K_{i} or IC_{50}) of ABT-263 against different isoforms of Bcl-2 family are determined with competitive fluorescence polarization assays. The following peptide/protein pairs are used: f-bad (1 nM) and Bcl-xL (6 nM), f-Bak (1 nM) and Bcl-2 (10 nM), f-Bax (1 nM) and Bcl-w (40 nM), f-Noxa (2 nM) and Mcl-1 (40 nM), and f-Bax (1 nM) and Bcl-2-A1 (15 nM). Binding affinities for Bcl-xL are also determined using a time-resolved fluorescence resonance energy transfer assay. Bcl-xL (1 nM, His tagged) is mixed with 200 nM f-Bak, 1 nM Tb-labeled anti-His antibody, and ABT-263 at room temperature for 30 min. Fluorescence is measured on an Envision plate reader using a 340/35 nm excitation filter and 520/525 nm (Tb-labeled anti-His antibody) emission filters.

**Cell Assay:**[1]

**Cell Lines:** SCLC cell lines

**Concentrations:** 0-1 μM

**Incubation Time:** 48 hours

**Methods**

Human tumor cell lines SCLC cell lines are maintained at 37 °C containing 5% CO_{2}. SCLC cell lines are cultured in RPMI 1640 with 10% fetal bovine serum (FBS), 1% sodium pyruvate, 25 mM HEPES, 4.5 g/L glucose, and 1% penicillin/streptomycin. Leukemia and lymphoma cell lines are cultured in RPMI 1640 supplemented with 10% FBS and 1% penicillin/streptomycin. Cells (1-5×10^{6}) are treated by ABT-263 for 48 hours in 96-well culture plates in a final volume of 100 μL and cytotoxicity is assessed with the CellTiter Glo assay. In vitro cytotoxicity of ABT-263 is assayed.

**Animal Study:**[1]

**Animal Models:** C.B-17 scid bg or C.B-17 scid mice

**Formulation:** Formulated in 10% ethanol, 30% polyethylene glycol 400, and 60% Phosal 50 PG

**Doses:** 100 mg/kg/d

**Administration:** Administered via o.g.

Selleck Chemicals wishes you the best possible online shopping experience with our 365 day unconditional Return Policy. If you are not satisfied with your purchase, either for protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please see the following instructions when you return products.

1. All requests for returns should be communicated to Selleck Chemicals prior to shipping. Any items returned to Selleck Chemicals should be in the original packaging and in the same condition as originally purchased.
2. When returning purchased goods, please inform us of the purchase order number or package tracking number.
3. Return shipping is absolutely FREE.
4. This offer is only valid for products purchased directly from Selleck and its authorized distributors.
5. Once your return request is received and approved, your refund will be processed or automatically applied to your credit card within 7 days. Please note that depending on your credit card company, it may take additional 2-10 business days for us to post the refund to your account.

**Toll Free:**
(877) 796-6397

-- USA and Canada only--

**Fax:**
+1-713-796-9816

**Orders:**
+1-832-582-8158

sales@selleckchem.com

**Tech Support:**
tech@selleckchem.com

**Website:**
www.selleckchem.com

---

www.selleckchem.com/datasheet/ABT-263-DataSheet.html
ABT-263 (Navitoclax) Datasheet | Buy ABT-263 (Navitoclax) from supplier Selleckchem.com

Customer Reviews

Data from [PLoS ONE, 2011, 6, e21980]
ABT-263 (Navitoclax) purchased from Selleck
HCC cells are resistant to low doses of ABT-263. A. LH86 and B. Huh7 cells were treated with ABT-263 (0-20 μM) for up to 24 h. Apoptosis was measured through Hoechst staining to show apoptotic cells with condensed nuclei as described in "materials and methods" (representative apoptotic cells were marked with white arrows in ABT-263 treatment panel). C. HCC cells were treated with increasing doses of ABT-263 as indicated for up to 24 h. Then cells were harvested and cell lysates were prepared and subjected to Western blotting. Caspase activation was assessed through detecting the cleaved bands of caspase 9 and caspase 3. β-actin protein levels were used as an equal protein loading control.

Data from [Clin Cancer Res, 2010, 16, 4217-4225]
ABT-263 (Navitoclax) purchased from Selleck
The reduced biological activity of ABT-263 is not due to a reduced potency or plasma membrane permeability. A. F-dextran-loaded liposomes were incubated with BAX, N/C-BID, and BCL-XL, and the indicated concentrations of ABT-737 or ABT-263 (0.04, 0.2, 1, or 5 μmol/L) for 2.5 hours at room temperature. Both ABT-737 and ABT-263 reversed BCL-XL-mediated inhibition of BAX and N/C-BID liposome permeabilization (n = 3). B. purified CLL cells were treated with 0.05% digitonin to permeabilize the plasma membrane and the cells were washed and pelleted by centrifugation at 13,000 rpm. The permeabilized cells were incubated with different concentrations of ABT-737 and ABT-263 for 1 hour at 37°C. The release of cytochrome c (Cyt c) from the cell pellet into the supernatant (SN) was assessed after centrifugation by Western blotting.

References

PLEASE KEEP THE PRODUCT UNDER -20°C FOR LONG-TERM STORAGE.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE

Specific storage and handling information for each product is indicated on the product datasheet. Most Selleck products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. 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, but save your shipping charges by using the most economical storage conditions for an overnight shipment. Upon receipt of the product, follow the storage recommendations on the product datasheet.