Product Name: YM155

Revision Date: 6/30/2016

Product Data Sheet

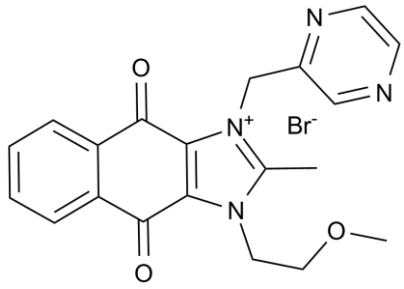
Chemical Properties

Product Name: YM155

Cas No.: 781661-94-7

M.Wt: 443.3

Formula: C20H19BrN4O3



Synonyms: Sepantronium bromide,YM-155

Chemical Name: 1-(2-methoxyethyl)-2-methyl-3-(pyrazin-2-ylmethyl)benzo[f]benzimidazol-3-ium-4,9-dione;bromide

Canonical SMILES: CC1=[N+](C2=C(N1CCOC)C(=O)C3=CC=CC=C3C2=O)CC4=NC=CN=C4.[Br-]

Solubility: >22.2mg/mL 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 : IAP

Pathways: Apoptosis >> IAP

Description:

Sepantronium bromide, also known as YM155, is a novel small-molecule suppressant of surviving, the smallest member of inhibitor of apoptosis (IAP) gene family. It exhibits a potent suppressive activity against survivin but has little effect on expression levels of other IAP family members or B-cell lymphoma 2 (BCL-2) related proteins. YM155 also suppresses proliferation in a broad range of human cancer cell lines, induces tumor regression in non-small cell lung cancer

(NSCLC), melanoma, bladder, aggressive non-Hodgkin lymphoma, and breast cancer xenograft models, reduces spontaneous metastases, and significantly prolongs the survival of animal harboring established metastatic tumors derived from a human triple-negative breast cancer (TNBC) cell lines.

***Reference**:*

Naoki Kaneko, Kentaro Yamanaka, Aya Kita, Kenji Tabata, Takafumi Akabane, and Masamichi Mori. Synergistic antitumor activities of sepantronium bromide (YM155), a surviving suppressant, in combination with microtubule-targeting agents in triple-negative breast cancer cells. Biol Pharm Bull 2013.

Yan-Fang Tao, Jun Lu, Xiao-Juan Du, Li-Chao Sun, Xuan Zhao, Liang Peng, Lan Cao, Pei-Fang Xiao, Li Pang, Dong Wu, Na Wang, Xing Feng, Yan-Hong Li, Jian Ni, Jian Wang and Jian Pan. Survivin selective inhibitor YM155 induce apoptosis in SK-NEP-1 Wilms tumor cells. BMC Cancer 2012, 12:619

Protocol

Cell experiment:

Cell lines	PC-3 and PPC-1 cells
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, 48 hours
Applications	In both cell lines, YM155, at concentrations from 10 to 1000 nM, significantly decreased the viability of cells in a dose-dependent manner. When exposed to YM155, PC-3 and PPC-1 showed a concomitant increase in caspase-3 activity. These results suggest that YM155 induces apoptosis in human HRPC cells.

Animal experiment [3]:

Animal models	BALB/c nu/nu mice injected with PC-3 cells
Dosage form	Subcutaneous injection, 10 mg/kg
Applications	Mice with large established s.c. xenografted PC-3 tumors received a 3-day continuous infusion of YM155 at 10 mg/kg. Saline control animals showed rapid tumor growth from day 0 (366 mm3) to day 7 (1,123 mm3), with no change in intratumoral surviving and actin

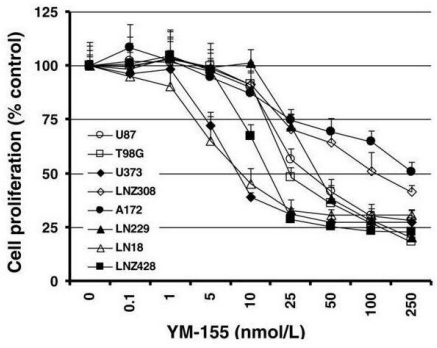
	protein levels. In contrast, animals treated with YM155 showed tumor regression from day 0 (292 mm3) to day7 (162 mm3), and a clear decrease in intratumoral survivin levels on days 3 and 7 was observed.
Other notes	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Reference:
[1] Nakahara T, Takeuchi M, Kinoyama I, et al. YM155, a novel small-molecule survivin suppressant, induces regression of established human hormone-refractory prostate tumor xenografts. Cancer research, 2007, 67(17): 8014-8021.

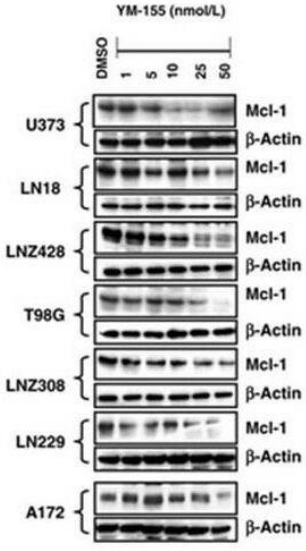
Product Citations

1.GAO, JH, et al. "YM155 inhibits tumor growth and enhances chemosensitivity to cisplatin in osteosarcoma." Eur Rev Med Pharmacol Sci 19.11 (2015): 2062-2069.

Product Validation



YM-155 inhibits cell proliferation



YM-155 downregulates Mcl-1

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