

Product Data Sheet

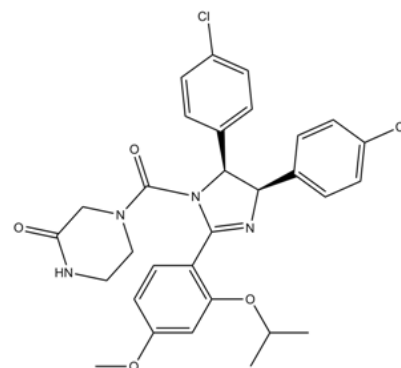
Chemical Properties

Product Name: Nutlin-3b

Cas No.: 675576-97-3

M.Wt: 581.49

Formula: C₃₀H₃₀Cl₂N₄O₄



Chemical Name: 4-[(4R,5S)-4,5-bis(4-chlorophenyl)-2-(4-methoxy-2-propan-2-yloxyphenyl)-4,5-dihydroimidazole-1-carbonyl]piperazin-2-one

Canonical SMILES: CC(C)OC1=C(C=CC(=C1)OC)C2=NC(C(N2C(=O)N3CCNC(=O)C3)C4=CC=C(C=C4)Cl)C5=CC=C(C=C5)Cl

Solubility: Soluble in DMSO > 10 mM

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 : Apoptosis

Pathways: MDM2

Description:

Nutlin-3b is an inactive enantiomer of nutlin-3 [1].

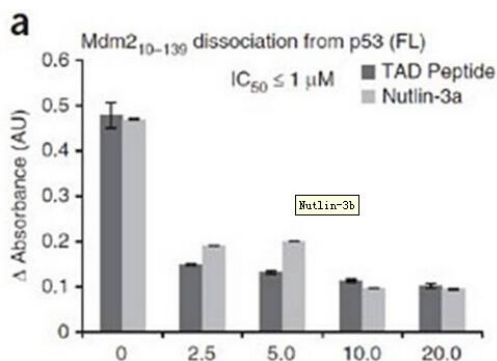
Nutlin-3 is a small-molecule inhibitor of MDM2, interfering with MDM2-directed TP53 degradation. The stabilization of WT-TP53 leads to cell cycle arrest, growth inhibition, and apoptosis. As an inactive enantiomer, Nutlin-3b does not show any effect on the proliferation and

has no insignificant effect on gene expression in cancer cells. Nutlin-3b binds MDM2 with about 200-fold lower affinity and is 150 times less active than 3a (an active enantiomer of nutlin-3). Nutlin-3b is usually used as a negative control. It shows no induction of MDM2, p53 or p21 expression and has no ability in colony-formation in H460 cell line. It also has no effect on cell cycle [1, 2].

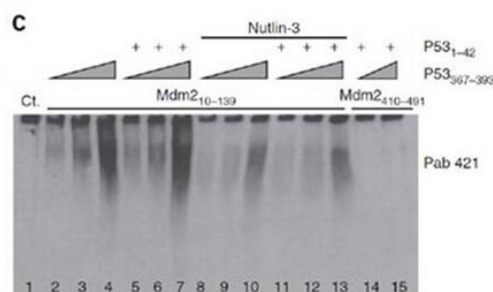
Reference:

- [1] Tovar C, Rosinski J, Filipovic Z, Higgins B, Kolinsky K, Hilton H, Zhao X, Vu BT, Qing W, Packman K, Myklebost O, Heimbrook DC, Vassilev LT. Small-molecule MDM2 antagonists reveal aberrant p53 signaling in cancer: implications for therapy. *Proc Natl Acad Sci U S A*. 2006 Feb 7;103(6):1888-93.
- [2] Cao C, Shinohara ET, Subhawong TK, Geng L, Kim KW, Albert JM, Hallahan DE, Lu B. Radiosensitization of lung cancer by nutlin, an inhibitor of murine double minute 2. *Mol Cancer Ther*. 2006 Feb;5(2):411-7.

Product Validation



Nutlin-3 disrupts p53's interaction with the N-terminal of Mdm2



Binging of the C-terminal domain of p53 and the N-terminal domain of Mdm2 is interrupted by the treatment of Nutlin-3

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