Product Data Sheet

Chemical Properties

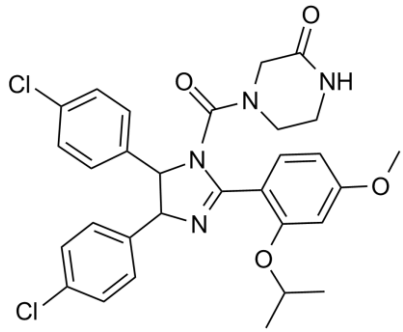
Product Name: Nutlin-3

Cas No.: 890090-75-2

M.Wt: 581.5

Formula: C30H30Cl2N4O4

Synonyms: Nutlin 3,MDM2 Antagonist



Chemical Name: 4-[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: >58.2mg/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 : p53

Pathways: Apoptosis >> p53

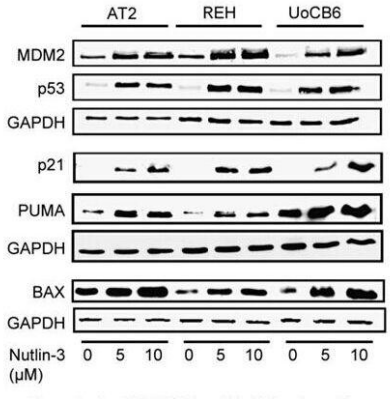
Description:

Nutlin-3, a tetra-substituted imidazoline, is a potent and selective small-molecule antagonist of murine double minute 2 (MDM2), which occupies the binding site of p53 in MDM2 and consequently prevent MDM2 binding to p53 leading to the disruption of the autoregulator feedback loop and the fostering of the p53 tumor suppressor network. It also binds to murine double minute 4 (MDM4), which is another component of the p35 tumor surveillance pathway. Nutlin-3 is being investigated as an antitumor agent for its antiangiogenic activity in cells through

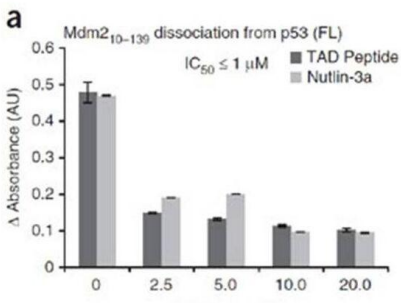
inhibiting endothelial cell migration, inducing cell cycle arrest, and increasing apoptotic tendency in endothelial cells.

Reference:
Bernd R. Binder. A novel application for murine double minute 2 antagonists: the p53 tumor suppressor network also controls angiogenesis. Circ Res. 2007; 100: 13-14

Product Validation



Western blot analysis of AT2,REH and UoCB6 cells confirms accumlation of p53 and induction of downstream targets MDM2,PUMA,BAX and p21 upon exposure to Nutlin-3.Glyceraldehyde 3-phsphate dehydrogenase (GAPDH) was used as loading control.Results are representative of three independent experiments.



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

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.

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