Product Data Sheet

Chemical Properties

Product Name: Isatin
Cas No.: 91-56-5
M.Wt: 147.13
Formula: C8H5NO2
Synonyms:

Chemical Name: indoline-2,3-dione
Canonical SMILES: O=C(C1=O)C2=C(N1)C=CC=C2
Solubility: Soluble 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: MAO >> Isatin
Pathways: Metabolism >> MAO >> Isatin
Description: IC50: 15 μM
Isatin is a monoamine oxidase inhibitor.
Monoamine oxidase inhibitors have been used as therapies for the treatment of depression, particularly in treating atypical depression. Monoamine oxidase inhibitors are also used in the treatment of Parkinson's disease and other disorders.

In vitro: Previous study found that isatin treatment at 1-400 μM for 24h could induce a significant dose-dependent increase in MTT metabolism by SH-SY5Y cells, which was not due to the increase in cell division. In addition, isatin at the higher concentrations was able to trigger cell death, though MTT metabolism was still increased, indicating that the surviving cells were hypermetabolic. With a longer treatment, isatin was found to cause cell death in a dose-dependent manner, and the predominant mode of cell death was apoptosis at lower concentrations, while at the highest concentration increasing numbers of necrotic cells were also observed [1].

In vivo: Animal study showed that the motor activity of Japanese encephalitis virus (JEV)-induced rats receiving isatin was improved significantly when compared with that of untreated JEV-infected rats. In addition, isatin was able to prevent the decrease in striatal DA levels in JEV-rats and the increased turnover of dopamine (DA) (DOPAC/DA) induced by JEV was significantly inhibited by isatin. Such results indicated that the exogenously administered isatin was able to improve JEV-induced parkinsonism via increasing the striatum DA concentrations [2].

Clinical trial: Up to now, isatin is still in the preclinical development stage.

Reference:

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.