Product Data Sheet

Chemical Properties

Product Name: Ampkinone

Cas No.: 1233082-79-5

M.Wt: 505.5

Formula: C31H23NO6

Chemical Name: 2-(4-benzoylphenyl)-6-hydroxy-7-methoxy-4,4-dimethyl-[1]benzopyrano[3,4-e]isoindole-1,3(2H,4H)-dione

Canonical SMILES: O=C1N(C2=CC=C(C(C=C=CC=CC=C3)=O)C=C2)C(C4=C1C=CC5=C4C(C)(C)OC6=C(O)C(OC)=CC=C65)=O

Solubility: ≤2mg/ml in DMSO; 10mg/ml in dimethyl formamide

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: PI3K/Akt/mTOR Signaling

Pathways: AMPK

Description: Ampkinone is an AMPK activator.

Adenosine 5'-monophosphate (AMP) activated protein kinase (AMPK) has considered as an promising target molecule for the treatment of metabolic disorders, such as obesity and type 2 diabetes.
In vitro: Ampkinone was identified as an indirect AMPK activator, which was derived from the small molecule library constructed by diversity-oriented synthesis. Ampkinone was able to stimulate the phosphorylation of AMPK through the indirect activation of AMPK in various cell lines. Moreover, ampkine-mediated activation of AMPK needed the activity of LKB1 and led to increased glucose uptake in muscle cells [1].

In vivo: Animal study found that ampkine-treated DIO mice had significantly reduced total body weight and overall fat mass. Histological examination and measurement of lipid parameters showed that ampkine could effectively improve metabolic abnormalities. These results demonstrated that ampkine had a potential as a new class of therapeutic agent for antidiabetic and antiobesity treatment through the indirect stimulation of AMPK [1].

Clinical trial: So far, no clinical study has been conducted.

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.