Product Data Sheet

Chemical Properties

Product Name: Amino Tadalafil

Cas No.: 385769-84-6

M.Wt: 390.4

Formula: C21H18N4O4

Chemical Name: (6R,12aR)-2-amino-6-(1,3-benzodioxol-5-yl)-2,3,6,7,12,12a-hexahydr o-pyrazino[1′,2′:1,6]pyrido[3,4-b]indole-1,4-dione

Canonical SMILES: O=C1N(N)CC(N2[C@H](C3=CC=CC(OCO4)C4=C3)C5=C(C6=CC=CC=C6 N5)C[C@@]21[H])=O

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: Metabolism

Pathways: PDE

Description:

Amino tadalafil is a potent inhibitor of phosphodiesterase 5 (PDE5). PDE5, an enzyme found primarily in the smooth muscle of the corpus cavernosum, selectively cleaves and degrades cGMP to 5′-GMP. PDE5 inhibitors are similar in structure to cGMP and they competitively bind to PDE5 and inhibit cGMP hydrolysis, thus enhancing the effects of NO,
resulting in prolonging an erection.

In vitro: Amino-tadalafil is a structural analogue of tadalafil, the active pharmaceutical ingredient in Cialis, a prescription drug approved in the US for treatment of erectile dysfunction (ED). Similarly, there have also been reports of herbal or dietary supplements being adulterated with designer ED analogues such as amino-tadalafil [1].

In vivo: In rats treated with both melatonin and tadalafil, the recoveries were more pronounced than in rats given either melatonin or tadalafil alone. The ICP/mean arterial pressure value in vehicle-treated rats was significantly higher than in the control group, while in the tadalafil- and tadalafil + melatonin-treated groups have returned this value had returned to control levels. In addition, as an individual treatment, and especially when combined with tadalafil, melatonin prevented spinal cord injury (SCI)-induced oxidative damage to cavernosal tissues and restored ED, most likely due to its anti-oxidant effects [2].

Clinical trial: Up to now, amino tadalafil 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.