Product Data Sheet

Chemical Properties

Product Name: VX-661
Cas No.: 1152311-62-0
M.Wt: 520.5
Formula: C26H27F3N2O6

Chemical Name: 1-(2,2-difluoro-1,3-benzodioxol-5-yl)-N-[(2R)-2,3-dihydroxypropyl]-6-fluoro-2-(1-hydroxy-2-methylpropan-2-yl)indol-5-yl]cyclopropane-1-carboxamide

Canonical SMILES: CC(C)(CO)C1=CC2=CC(=C(C=C2N1CC(CO)O)F)NC(=O)C3(CC3)C4=CC5=C(C=C4)OC(O5)(F)F

Solubility: ≥21.8mg/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: Membrane Transporter/Ion Channel
Pathways: CFTR
Description:
VX-661, one of vertex derivatives, corrects F508del-CFTR trafficking and increases F508del-CFTR protein activity in vitro [1]. VX-661 treated alone or in combination with ivacaftor have shown to enhance F508del-CFTR trafficking to the cell surface. VX-661 has been at phase 2 study [1].

Reference:

Protocol

Cell experiment:

Cell lines
human CF bronchial epithelial cell line CFBE41o

Preparation method
The solubility of this compound in DMSO > 21.8mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reacting conditions

Applications
VX-661 could partially revert the folding and processing defects and rescue PM(plasma membrane) densities of ΔF508-CFTR(Cystic fibrosis transmembrane regulator). VX-770 was a potentiators that increase channel gating and conductance. VX-770 reduced the correction efficacy of corrector VX-661. The VX-770 effect was attenuated in VX-661 treated cells, probably due to partial stabilization of the mature ΔF508-CFTR pool. A combination of chronic VX-661 and acute VX-770, together with a cAMP (cyclic adenosine 3′,5′-monophosphate) agonist, increased ΔF508-CFTR conductance to ~25% of that in non-CF HBE (human bronchial epithelial).

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. Short-term 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.