Product Data Sheet

Chemical Properties

Product Name: Regadenoson
Cas No.: 313348-27-5
M.Wt: 390.35
Formula: C15H18N8O5

Chemical Name: (Z)-1-(6-amino-9-((2R,3R,4S,5R)-3,4-dihydroxy-5-(hydroxymethyl)tetrahydrofuran-2-yl)-9H-purin-2-yl)-N-methyl-1H-pyrazole-4-carbimide acid

Canonical SMILES: C/N=C(O)/C(C=N1)=CN1C2=NC(N)=C(N=CN3[C@@](O)([H])[C@](O)([H])[C@](O)([H])][C@@](O)([H])CO)C3=N2

Solubility: >18.05mg/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: GPCR/G protein
Pathways: Adenosine Receptor

Description:
Ki: 1095 nM for A2A receptor
The adenosine A2A receptor is a G-protein-coupled receptor that has been extensively studied during the past few decades because it offers numerous possibilities for therapeutic applications.
Regadenoson (CVT-3146) is a highly selective, potent, low affinity A2A adenosine agonist. In vitro: Regadenoson was selective for the A2A adenosine receptor versus the A1, A2B, and A3 receptors in binding and functional studies. Regadenoson was also found to be a full and potent agonist to cause coronary vasodilation, a response that has a very large A2A receptor reserve [1]. In vivo: In a study of 10 conscious dogs, authors compared intravenously injected regadenoson to that of adenosine. Regadenoson caused a dose-dependent increase of coronary blood flow (CBF), whereas adenosine was less potent but produced equivalent hyperemia. Thus, authors concluded that regadenoson is a potent coronary vasodilator with a short duration of action, minimal and transient systemic hemodynamic effects, and ease of administration [1]. Clinical trial: Previous study investigated the magnitude and duration of the effect of regadenoson on CBF velocity in humans. Results demonstrated that regadenoson produced a dose-dependent increase in duration of CBF velocity augmentation. At all dose levels, regadenoson caused a rapid increase in CBF velocity that was near peak within 30 seconds of the bolus delivery. Regadenoson was generally well tolerated, and side effects at all doses were infrequent, mild, and self-limited [1].

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.