Chemical Properties

Product Name: Balaglitazone

Cas No.: 199113-98-9

M.Wt: 395.43

Formula: C20H17N3O4S

Synonyms: DRF-2593; NN-2344; DRF2593; NN2344; DRF 2593; NN 2344

Chemical Name: 5-(4-((3-methyl-4-oxo-3,4-dihydroquinazolin-2-yl) methoxy) benzyl) thiazolidine-2,4-dione

Canonical SMILES: O=C1C2=CC=CC=C2N=C(COC3=CC=C(CC4C(NC(S4)=O)=O)C=C3)N1C

Solubility: $\geq 15.45$mg/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: Metabolism

Pathways: PPAR

Description:
Balaglitazone is a partial agonist of peroxisome proliferator-activated receptor (PPAR) γ [1]. PPAR plays important roles in the regulation of insulin, triglycerides and lipid metabolism. It is an attractive target for the therapy of Type II Diabetes. Balaglitazone is a partial agonist of PPARγ. The maximum inhibition of PPARγ activity by balaglitazone is 52%. Thus balaglitazone is supposed to have decreased side effects. It has showed potent effects on lowering blood glucose in various
animal models [1 and 2].
In a cell-based assay using HEK293 cells transfected with fused PPARγ, treatment of balaglitazone showed sigmoid activation with an EC50 value of 1.35μM. When combined with rosiglitazone, balaglitazone at increased concentrations resulted in the reduction of rosiglitazone’s activity to the level of balaglitazone alone at concentration of 100 nM [3].
In adult male diabetic mice, the oral administration of balaglitazone at increased doses showed more potent and efficacious at lowering glucose levels than rosiglitazone. Balaglitazone also caused reduction of bodyfluid accumulation and fat accumulation without heart enlargement, indicating that it had a better safety profile on the cardiovascular system. Besides that, balaglitazone treatment lasted for 21 days exerted no significant impact on the volumes of blood or plasma. Moreover, balaglitazone was found to have no effect on bone formation at concentrations of up to 10 mg/kg indicating that it was only a partial agonist and led no loss of bone [1 and 2].

Reference:

Caution
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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.