Product Name: Isoprenaline HCl

Chemical Properties

**Product Name:** Isoprenaline HCl

**Cas No.:** 51-30-9

**M.Wt:** 247.72

**Formula:** C11H17NO3.HCl

**Chemical Name:** 4-[1-hydroxy-2-(propan-2-ylamino)ethyl]benzene-1,2-diol; hydrochloride

**Canonical SMILES:** CC(C)NCC(C1=CC(=C(C=C1)O)O)O.Cl

**Solubility:** Soluble in DMSO > 10 mM

**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:** Adrenergic Receptor

**Description:**
Isoprenaline HCl is an agonist of β-adrenergic receptor [1]. The adrenergic receptors are a class of G protein-coupled receptors that are targets of norepinephrine and epinephrine. When reacting with epinephrine, β-adrenergic receptor causes vasodilation.

In human umbilical vein endothelial cells (HUVECs), isoprenaline (100 nM) significantly increased the expression of connexins Cx43 and also increased Cx40 and Cx37. Also, isoprenaline increased...
the number of coupling cells. Isoprenaline enhanced the formation of branches and complex tube networks [2].

In the isolated field stimulated rat vas deferens, isoprenaline inhibited contractions with EC50 value of 45.6 nM. In tissues in which β2-adrenoreceptors were maximally blocked by timolol, isoprenaline inhibited contractility with EC50 value of 1.5 μM [1]. In CFW mice, IPR caused the maximal proliferative response of bone marrow cells and increased erythropoietic activity. These results suggested that isoprenaline activated beta-adrenergic receptor, which then increased the proliferative and differentiation activities of hemopoietic stem cells [3].

Reference:

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTHIC 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.