Human β2 Adrenergic Receptor Cell Line

Catalog #A600; Lot 888

SPECIFICATIONS:

Synonyms: ADRB2

Host cell: CHO-K1

Expressed gene: Genbank Accession Number NM_000024

Mycoplasma Status: Negative (MycoAlert Kit)

Packaging: Cryopreserved cells, 6 million cells per vial.

Propagation media: Ham's F12, 1x NEAA, 10% dFBS, and 0.5 mg/mL G418

Stability: 12 passages of continuous culture (6 weeks) at 2 passages/week

Storage Recommendation: Liquid nitrogen

BACKGROUND: β-Adrenoceptors (β1, β2, β3) are G protein-coupled receptors expressed in both central and peripheral sites and are activated either by norepinephrine released from symphathetic terminals or by epinephrine released from the adrenal medulla. Most β-adrenoceptor-mediated actions involve stimulation of intracellular adenylate cyclase and lead to relaxation of vascular, urogenital and bronchial smooth muscle, stimulation of cardiac rate and force, stimulation of rennin secretion, and stimulation of insulin and glucagons secretion. Besides its function in cardiac stimulation, β2 adrenoceptors play a major role in bronchodilation and are a good target for asthma and chronic obstructive pulmonary disease.

REPRESENTATIVE DATA:

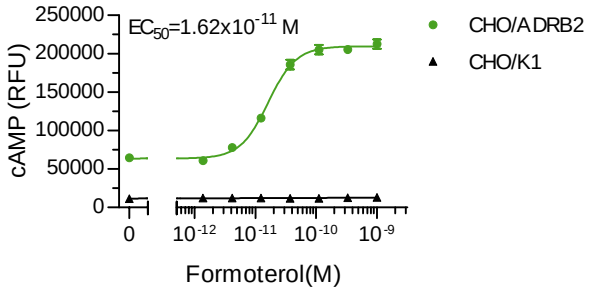

Figure 1. cAMP dose-response for Formoterol stimulation of β2-Adenoceptor(ADRB2) expressing CHO-K1 Cells compared to untransfected host CHO-K1 cells. CHO-K1 cells that stably express the ADRB2 receptor (green circles) or host CHO-K1 cells (black triangles) were stimulated with the indicated concentrations of formoterol with 0.5 mM IBMX for 30 min at 37°C. Intracellular cAMP was assayed using the HitHunter Kit (DiscoverRX). Data represent the average +/- standard deviation of triplicate determinations.

REFERENCES:

Steagall, W. K., et al. (2007) Beta-2-adrenergic receptor polymorphisms in cystic fibrosis. Pharmacogenet. Genomics 17 (6), 425-430.

Sears MR and Lotvall J (2005) Past, present and future—β2-adrenoceptor agonists in asthma management. Respir. Med. 99: 152-70.

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