

Datasheet for ABIN7042905

anti-beta 2 Adrenergic Receptor antibody (Extracellular) (FITC)



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2 Images

Overview

Quantity:	50 µL
Target:	beta 2 Adrenergic Receptor (ADRB2)
Binding Specificity:	AA 15-30, Extracellular
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This beta 2 Adrenergic Receptor antibody is conjugated to FITC
Application:	Flow Cytometry (FACS), Live Cell Imaging (LCI)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to β 2-Adrenergic Receptor Conjugated to the Fluorescent Dye FITC
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)NGSRAPDHDVTQERDE, corresponding to amino acid residues 15-30 of mouse ADRB2
Isotype:	IgG
Specificity:	Extracellular, N-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Human - 15,16 amino acid residues identical, rat - 14
Characteristics:	Anti- β 2-Adrenergic Receptor (extracellular) Antibody (ABIN7042904, ABIN7043910 and

Product Details

ABIN7043911) is a highly specific antibody directed against an extracellular epitope of the mouse β 2-adrenoceptor. The antibody can be used in western blot and immunohistochemistry applications. It has been designed to recognize β 2AR from mouse, rat, and human samples.

\nAnti- β 2-Adrenergic Receptor (extracellular)-FITC Antibody (ABIN7042904, ABIN7043910 and ABIN7043911)-F) is directly conjugated to fluorescein isothiocyanate (FITC). This labeled antibody can be used in immunofluorescent applications such as direct flow cytometry using live cells.

Purification: Affinity purified on immobilized antigen.

Grade: KO Validated

Target Details

Target: beta 2 Adrenergic Receptor (ADRB2)

Alternative Name: ADRB2 ([ADRB2 Products](#))

Background: Beta-2 adrenoceptor, Beta-2 adrenoreceptor, ADRB2, B2AR, G-protein coupled receptors (GPCRs) comprise the largest protein superfamily in mammalian genomes. Signal transduction by GPCRs is fundamental for most physiological processes, spanning from vision, smell and taste to neurological, cardiovascular, endocrine, and reproductive functions, thus, making the GPCR superfamily a major target for therapeutic intervention. The β 2-adrenergic receptor (ADRB2) is comprised of seven transmembrane α -helices, connected by three extracellular loops and three intracellular loops. The extracellular part, responsible for ligand binding, also includes the N-terminus. The intracellular C-terminal interacts with G-proteins, arrestins and other downstream effectors¹. Unlike some GPCRs, ADRB2 activates more than one G-protein and signals through at least one known G-protein-independent pathway, arrestin. In addition, there is a rich diversity of available ligands for ADRB2. These ligands are often characterized as inverse agonists that suppress basal activity, full agonists that maximally activate the receptor, partial agonists that produce submaximal activity even at saturating concentrations, and neutral antagonists that occupy the orthosteric binding site but do not affect basal activity². ADRB2 located on the surface of cardiomyocytes, mediates distinct effects on cardiac function and the development of heart failure by regulating production of the secondary messenger cyclic adenosine monophosphate (cAMP). In cardiomyocytes from healthy adult rats and mice, spatially confined ADRB2 induces cAMP signals that are localized exclusively to the deep transverse tubules. In contrary, in cardiomyocytes derived from a rat model of chronic heart failure, ADRB2 is redistributed from the deep transverse tubules to the cell crest, which leads to diffuse receptor-mediated cAMP signaling. Thus, the redistribution of ADRB2 in heart

Target Details

failure might contribute to the failing myocardial phenotype³.

Alternative names: beta2-Adrenergic Receptor, Beta-2 adrenoceptor, Beta-2 adrenoreceptor, ADRB2, B2AR

Gene ID: 11555

NCBI Accession: [NM_000024](#)

UniProt: [P18762](#)

Pathways: [cAMP Metabolic Process](#), [Synaptic Membrane](#), [Regulation of G-Protein Coupled Receptor Protein Signaling](#), [Brown Fat Cell Differentiation](#)

Application Details

Application Notes: Antigen preadsorption control: 1 µg peptide per 1 µg antibody
Application Dilutions Immunohistochemistry paraffin embedded sections ihc: N/A
Application Dilutions Western blot wb: N/A

Comment: Negative Control: (ABIN7582044)
Blocking Peptide: (ABIN7234676)

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: Reconstitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.

Concentration: 1 mg/mL

Buffer: PBS pH 7.4, 1 % BSA with 0.05 % sodium azide

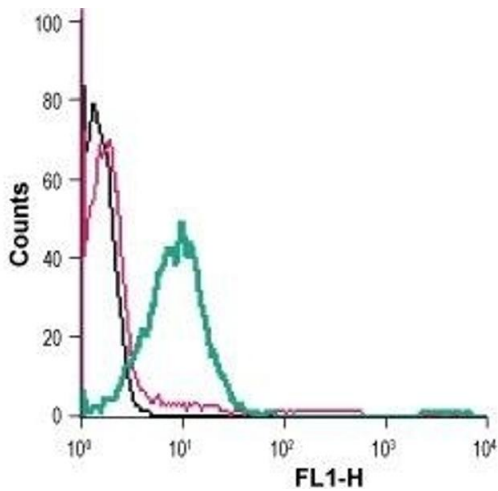
Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C, -20 °C

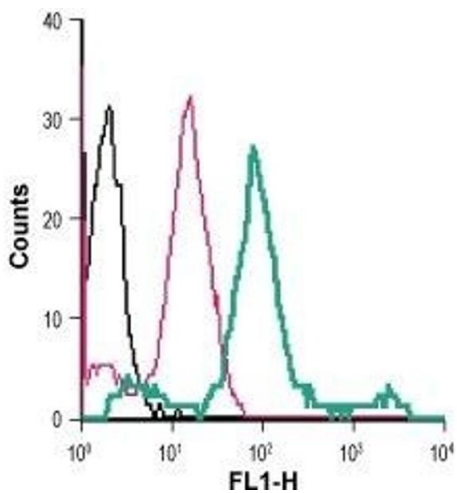
Storage Comment: Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C.
Storage after reconstitution: The reconstituted solution can be stored at 4°C, protected from the

light, for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).



Flow Cytometry

Image 1. Cell surface detection of β 2-Adrenoceptor in live intact human Jurkat T-cell leukemia cells: (black line) Cells.(red line) Cells + Rabbit IgG isotype control-FITC. (green line) Cells + Anti- β 2-Adrenergic Receptor (extracellular)-FITC Antibody (ABIN7042905, ABIN7045467, ABIN7045468 and ABIN7045469), (5 μ g/0.5x 10⁶ cells).



Flow Cytometry

Image 2. Cell surface detection of β 2-Adrenoceptor in live intact human THP-1 monocytic leukemia cells: (black line) Cells.(red line) Cells + Rabbit IgG isotype control-FITC.(green line) Cells + Anti- β 2-Adrenergic Receptor (extracellular)-FITC Antibody (ABIN7042905, ABIN7045467, ABIN7045468 and ABIN7045469), (5 μ g/0.5x10⁶ cells).