



Datasheet for ABIN7538126

ADRB1 Protein



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2 Images

Overview

Quantity:	50 µg
Target:	ADRB1
Origin:	Human
Source:	Mammalian Cells
Protein Type:	Synthetic Nanodisc

Product Details

Purpose:	Human ADRB1 full length protein-synthetic nanodisc
Characteristics:	Unlike other membrane scaffold protein (MSP) Nanodisc on the market, our synthetic Nanodisc can be prepared directly from the cells. The polymers used during this process have a dual function. It dissolves the cell membranes, like the detergent, and uses cellular phospholipids to form Nanodisc around the membrane proteins. The target protein embedded Nanodiscs can then be purified.

Target Details

Target:	ADRB1
Alternative Name:	ADRB1 (ADRB1 Products)
Background:	The adrenergic receptors (subtypes alpha 1, alpha 2, beta 1, and beta 2) are a prototypic family of guanine nucleotide binding regulatory protein-coupled receptors that mediate the physiological effects of the hormone epinephrine and the neurotransmitter norepinephrine. Beta-1 adrenoceptors are predominately located in the heart. Specific polymorphisms in this gene have been shown to affect the resting heart rate and can be involved in heart failure.

Target Details

Molecular Weight:	The human full length ADRB1 protein has a MW of 51.2 kDa
UniProt:	P08588
Pathways:	cAMP Metabolic Process , Cellular Glucan Metabolic Process , Regulation of Muscle Cell Differentiation , Synaptic Membrane , Regulation of G-Protein Coupled Receptor Protein Signaling , G-protein mediated Events , Interaction of EGFR with phospholipase C-gamma , Brown Fat Cell Differentiation

Application Details

Comment:	<p>Advantages of Synthetic Nanodiscs:</p> <ul style="list-style-type: none">• Highly purified membrane proteins• High solubility in aqueous solutions• High stability• Proteins are in a native membrane environment and remain biologically active• No detergent and can be used for cell-based assays• No MSP backbone proteins <p>Limitations of Synthetic Nanodiscs:</p> <ul style="list-style-type: none">• Intolerant to acids and high concentrations of divalent metal ions
Restrictions:	For Research Use only

Handling

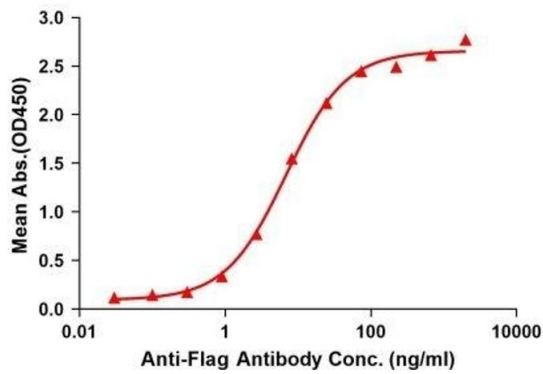
Format:	Lyophilized
Buffer:	Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5 % - 8 % trehalose is added as protectants before lyophilization.
Storage:	-20 °C,-80 °C
Storage Comment:	Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.
Expiry Date:	12 months



SDS-PAGE

Image 1. Human A-Nanodisc, Flag Tag on SDS-PAGE

ELISA assay to evaluate ADRB1-Nanodisc
0.2µg Human ADRB1-Nanodisc per well



ELISA

Image 2. Elisa plates were pre-coated with Flag Tag A-Nanodisc (0.2 µg/per well). Serial diluted anti-Flag monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-Flag monoclonal antibody binding with A-Nanodisc is 6.812 ng/mL.