

HCAR2 Protein, Human (Cell-Free, His)

Cat. No.:	HY-P702313
Synonyms:	Hydroxycarboxylic acid receptor 2; G-protein coupled receptor 109A; G-protein coupled receptor HM74A; Niacin receptor 1; Nicotinic acid receptor
Species:	Human
Source:	E. coli Cell-free
Accession:	Q8TDS4 (M1-P363)
Gene ID:	338442
Molecular Weight:	42.7 kDa

PROPERTIES

AA Sequence	<pre> MNRHHLQDHF LEIDKKNCCV FRDDFIVKVL PPVLGLEFIF GLLGNGLALW IFCFHLKSWK SSRIFLFNLA VADFLLIICL PFLMDNYVRR WDWKFGDIPC RLMLFMLAMN RQGSIIFLT V VAVDRYFRVV HPHHALNKIS NRTAAIISCL LWGITIGLTV HLLKKKMPIQ NGGANLCS SF SICTHFQWHE AMFLLEFFLP LGIILFCSAR IWSLRQRQM DRHAKIKRAI TFIMVVAIVF VICFLPSVVV RIRIFWLLHT SGTQNC EVYR SVDLAFFITL SFTYMNSMLD PVVYYFSSPS FPNFFSTLIN RCLQRKMTGE PDNNRSTSV E LTGDPNKTRG APEALMANS G EPWSPSYLGP TSP </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	HCAR2 protein serves as a high-affinity receptor for both nicotinic acid (niacin) and (D)-beta-hydroxybutyrate, orchestrating
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increased adiponectin secretion and reduced lipolysis through G(i)-protein-mediated inhibition of adenylyl cyclase. This pharmacological impact requires nicotinic acid doses that surpass those typically obtained from a regular diet. Additionally, HCAR2 mediates nicotinic acid-induced apoptosis in mature neutrophils. Upon receptor activation by nicotinic acid, a decrease in cAMP levels ensues, potentially influencing the activity of cAMP-dependent protein kinase A and the phosphorylation of target proteins, ultimately leading to neutrophil apoptosis. The relative potency for displacing nicotinic acid binding follows the order: 5-methyl pyrazole-3-carboxylic acid = pyridine-3-acetic acid > acifran > 5-methyl nicotinic acid = acipimox >> nicotinuric acid = nicotinamide.

Caution: Product has not been fully validated for medical applications. For research use only.

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