LEPR
Recombinant Human Leptin Receptor / CD295 (His Tag)

Catalog No.	CRH449A-His CRH449B-His	**Quantity:**	100 µg 200 µg
Alternate Names:	Leptin receptor, LEP-R, HuB219, OB receptor, OB-R, CD295		
Description:	Leptin Receptor or CD295 belongs to the gp13 family of cytokine receptors that are known to stimulate gene transcription via activation of cytosolic STAT proteins. This protein is a receptor for leptin (an adipocyte-specific hormone that regulates body weight), and is involved in the regulation of fat metabolism, as well as in a novel hematopoietic pathway that is required for normal lymphopoiesis. Leptin Receptor/CD295 is a transmembrane catalytic receptors found on NPY/AgRP and alpha-MSH/CART neurons in hypothalamic nuclei. Leptin receptors (Ob-Rs) are coded for by one human gene that produces six different isoforms; Ob-Ra - Ob-Rf. Ob-Rs exist as constitutive dimers at physiological expression levels. Only the Ob-Rb isoform can transduce intracellular signals and does so through activation of the JAK2/STAT3, PI 3-K and MAPK signaling cascades. Activation of Ob-Rs mediates transcriptional regulation of the hypothalamic melanocortin pathway and downregulates endocannabinoid expression. Leptin acts via leptin receptors. Leptin resistance has been proposed as a pathophysiological mechanism of obesity. In obese individuals, Ob-Ra (which is involved in active transport of leptin across the blood-brain barrier) expression is downregulated and the individual may be unresponsive to leptin signals. Ob-R antagonists are of great interest in the development of pharmacological treatments for obesity. Mutations in Leptin Receptor/CD295 have been associated with obesity and pituitary dysfunction.		
UniProt ID:	P48357		
Accession Number:	NP_002294.2		
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Asp 839) of human leptin receptor was expressed, fused with a C-terminal polyhistidine tag.		
Source:	HEK293 Cells		
Molecular Weight:	The recombinant human LEPR consists of 829 amino acids and has a predicted molecular mass of 95 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh LEPR is ~130-140 kDa due to glycosylation.		
Formulation:	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.		
Purity:	> 95 % as determined by SDS-PAGE.		
Endotoxin Level:	< 1.0 EU per µg protein as determined by the LAL method.		
Biological Activity:	Measured by its binding ability in a functional ELISA . Immobilized human Leptin at 5 µg/ml (100 µl/well) can bind human Leptin receptor with a linear range of 0.032-4.0 µg/ml .		

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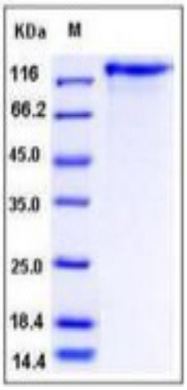
Predicted N-terminal: Phe 22

Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water to a concentration of 0.1 mg/mL and gently pipette the solution up and down the sides of the vial.
DO NOT VORTEX. Allow several minutes for complete reconstitution.

Storage & Stability: Stable for up to 1 year from date of receipt at -20°C to -80°C
After reconstitution, store working aliquots at -20°C to -80°C.
Avoid repeated freeze-thaw cycles.

SDS-PAGE



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