



Recombinant Protein Technical Manual

Recombinant Human LEPR/CD295 Protein (His & Fc Tag)(Active)
RPES4714

Product Data:

Product SKU: RPES4714

Size: 100µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_002294.2

Protein Information:

Molecular Mass: 121.4 kDa

AP Molecular Mass: 15565 kDa

Tag: C-His & Fc

Bio-activity: Measured by its binding ability in a functional ELISA. Immobilized human Leptin at 1.25 µg/ml (100 µl/well) can bind human Leptin receptor with a linear range of 0.032-4.0 µg/ml.

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application: Functional ELISA

Synonyms: Leptin receptor; LEP-R; HuB219; OB receptor; OB-R; CD295; LEPR; DB; OBR

Immunogen Information:

Sequence: Met 1-Asp 839

Background:

Leptin Receptor or CD295 belongs to the gp130 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.