

**Recombinant Human Leptin Receptor / LEPR / CD295 Protein (His & Fc tag)**

**Cat.NO.: TP08585**

3th Edition

**Synonyms:**CD295;LEP-R;LEPRD;OB-R;OBR

**Description:**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.

**Form:**PBS

**Molecular Weight:**121.4 kDa

**Sequences:**Met 1-Asp 839

**Purity:**> 95% by HPLC

**Concentration:**

**Endotoxin Level:**<1.0 EU per 1 ug of protein (determined by LAL method)

**Storage:**Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.