

**RPES8306**

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## Product Information

<b>Product SKU:</b> RPES8306	<b>Expression Host:</b> stable cell line	<b>Size:</b> 20µg
<b>Tag:</b> C-His	<b>Reactivity:</b> Human	<b>Accession:</b> P48357-1

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## Additional Information

<b>Calculated MW:</b> 89.8 kDa	<b>Observed MW:</b> 100-120 kDa
<b>Sequence:</b> Phe22-Asp839	

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## Protein Information

**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 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 the 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 the Leptin Receptor/CD295 have been associated with an obesity and pituitary dysfunction.

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<b>Synonyms:</b>	CD 295, CD295, CD295 antigen, Db, Fa, HuB219, LEP R, LEP-R, LEPR, LEPR, LEPRD, Leptin receptor, Leptin receptor fatty, Leptin receptor gene related protein, Leptin receptor precursor, Leptin receptor precursor, OB R gene related protein, OB receptor, OB-R, OB-RGRP, obl, Obr
<b>Endotoxin:</b>	< 1.0 EU/mg of the protein as determined by the LAL method
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
<b>Purity:</b>	> 90% as determined by reducing SDS-PAGE.
<b>Bio-Activity:</b>	Not validated for activity
<b>Storage:</b>	Generally, 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.