Data Sheet (Cat.No.TMAY-00609)

TargetMol

Anti-Leptin Receptor Antibody (9J507)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	9J507
Purification:	Protein A

Applications

Application:	ELISA
Recommended	ELISA: 1:5000-1:10000

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human Leptin Receptor / CD295 / LEPR protein (TMPY-01725)
Antigen Species:	Human
Synonyms:	LEP-R;OBR;LEPRD;leptin receptor;CD295;OB-R

Research 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 obesity and pituitary dysfunction.

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