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# Leptin Receptor antibody

**Catalog No.:** 15-288-21015

**Quantity:** 0.1 mg

**Concentration:** 0.1 mg/ml

**Background:** Leptin is the adipocyte-specific product of the ob gene. Expression of leptin in fully fed animals reflects adipocyte size and body-fat mass. Leptin signals the status of body energy stores to the brain, where signals emanate to regulate food intake and whole-body energy expenditure. The leptin gene was identified in the leptindeficient, obese ob/ob mouse by positional cloning techniques. Recently, leptin has been cloned in domestic species including pigs, cattle, and chickens. The receptor for OB has been identified in mouse, human and rat. In mouse, the mature receptor is a 1142 aa residue, type I (extracellular N-terminal) transmembrane protein with a predicted molecular weight of 81 kDa. The molecule shows 817 aa residues in its extracellular segment, 21 aa residues in its transmembrane domain, and 302 aa residues in its cytoplasmic tail. Mouse, human and rat OB receptors are all virtually identical in length, with the mouse extracellular and cytoplasmic segments exhibiting 77% and 72% aa identity with their human counterparts. The OB receptor is described as being a gp130 analog. The leptin receptor has at least five splice variants; the long form of the receptor is primarily expressed in the hypothalamus and is thought to be the predominant signaling isoform. Leptin receptors are members of the cytokine family of receptors and signal via janus-activated kinases(JAK)/signal transducers and activators of transcription (STAT) and mitogen-activated protein kinase (MAPK) pathways. Mutations in the leptin or leptin receptor genes results in morbid obesity, infertility, and insulin resistance in rodents and humans. Leptin receptors are expressed in most tissues, and in vitro evidence suggests that leptin may have direct effects on some tissues such as adipose tissue, the adrenal cortex, and the pancreatic beta-cell. Leptin is thought to influence whole-body glucose homeostasis and insulin action.

**Host / Isotype:** Chicken

**Immunogen:** Recombinant full length protein (Mouse), expressed in NSO cells.

**Format:** **Purification:** Immunogen affinity purified
**Buffer System:** Preservative:None Constituents: PBS with 5% trehalose

**Applications:** ELISA, WB
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:** Cross-reacts with Mouse. By ELISA, the antibody shows ‹ 30% cross-reactivity with recombinant Human Leptin receptor. Not yet tested in other species.