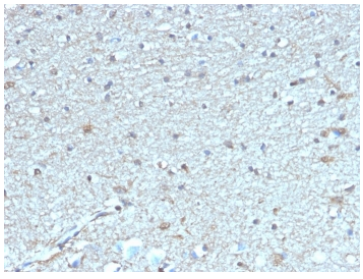
# LEPR Antibody LEPR/4304 / Leptin Receptor Monoclonal Antibody [clone LEPR/4304] (V9667)

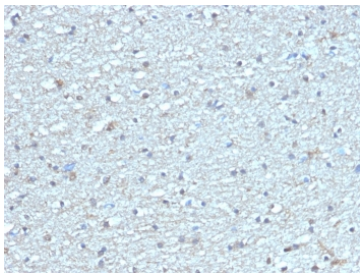
| Catalog No. | Formulation | Size |
|---|---|---|
| V9667-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide | 100 ug |
| V9667-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide | 20 ug |
| V9667SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |

**Bulk quote request**

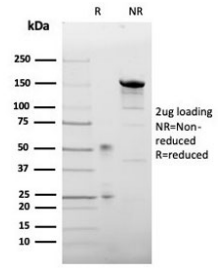
| | |
|---|---|
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Mouse |
| **Clonality** | Monoclonal (mouse origin) |
| **Isotype** | Mouse IgG2b, kappa |
| **Clone Name** | LEPR/4304 |
| **Purity** | Protein A/G affinity |
| **UniProt** | P48357 |
| **Localization** | Secreted, Cell surface |
| **Applications** | Immunohistochemistry (FFPE): 1-2ug/ml |
| **Limitations** | This LEPR Antibody LEPR/4304 / Leptin Receptor Monoclonal Antibody is available for research use only. |



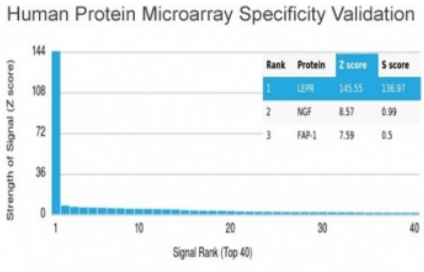
LEPR Antibody LEPR/4304 by IHC in human brain tissue. Immunohistochemistry of FFPE human brain tissue using LEPR Antibody LEPR/4304. Leptin receptor, also known as Ob-R or CD295, is involved in neuronal responses to circulating leptin and contributes to the regulation of appetite, energy expenditure, and neuroendocrine signaling. This Leptin Receptor Monoclonal Antibody, clone LEPR/4304, targets a member of the class I cytokine receptor family associated with JAK2/STAT3 signaling.



LEPR Antibody LEPR/4304 by IHC showing leptin receptor expression in human brain. Immunohistochemical analysis of a second FFPE human brain section using LEPR Antibody LEPR/4304. This experiment provides additional tissue-based evaluation of leptin receptor expression. LEPR participates in neuronal signaling pathways that integrate nutritional status with metabolic and endocrine responses. This Leptin Receptor Monoclonal Antibody recognizes a cytokine receptor involved in leptin-dependent signaling and metabolic homeostasis.




SDS-PAGE analysis of purified, BSA-free LEPR antibody (clone LEPR/4304) as confirmation of integrity and purity.




LEPR Antibody LEPR/4304 by protein microarray validation. Protein microarray validation of LEPR Antibody LEPR/4304 using a human protein array to assess target recognition and binding specificity. The assay evaluates antibody reactivity against leptin receptor (LEPR) relative to other proteins represented on the array, providing an additional measure of antibody specificity beyond tissue-based immunohistochemistry. This Leptin Receptor Monoclonal Antibody, clone LEPR/4304, targets Ob-R (CD295), a cytokine receptor involved in JAK/STAT signaling, metabolic regulation, and energy homeostasis.

## Description

LEPR Antibody LEPR/4304 recognizes leptin receptor (LEPR), also known as Ob-R or CD295, a transmembrane receptor that mediates the biological effects of leptin. Leptin is an adipocyte-derived hormone involved in regulating appetite, energy expenditure, and metabolic homeostasis. LEPR belongs to the class I cytokine receptor family and activates intracellular signaling pathways that coordinate energy balance with endocrine and physiological responses. The Leptin Receptor Monoclonal Antibody targets a receptor involved in metabolic regulation and hormone-dependent cellular signaling.

The human LEPR gene is located on chromosome 1p31.3 and produces multiple receptor isoforms through alternative RNA splicing. These isoforms share an extracellular leptin-binding region but differ in their intracellular domains and signaling capabilities. The long isoform, commonly designated LEPRb or Ob-Rb, contains an extended cytoplasmic domain required for efficient activation of several downstream signaling pathways. Shorter isoforms participate in leptin transport and other receptor-associated functions. LEPR is structurally related to other class I cytokine receptors but lacks intrinsic kinase activity.

Following leptin binding, receptor-associated Janus kinase 2 (JAK2) becomes activated and phosphorylates intracellular receptor residues that recruit signaling proteins. One major downstream pathway involves STAT3, which regulates transcriptional programs associated with appetite suppression and energy homeostasis. LEPR signaling also influences STAT5, PI3K/AKT, and MAPK pathways, depending on the cellular context. Negative regulators, including SOCS3 and PTP1B, help limit receptor activity and maintain signaling balance. The Leptin Receptor Monoclonal Antibody is relevant to research examining these interconnected regulatory mechanisms.

LEPR is particularly important in hypothalamic neuronal circuits that regulate food intake and energy expenditure. Receptor signaling also contributes to reproductive physiology, immune regulation, glucose metabolism, and interactions between nutritional status and endocrine function. Genetic disruption of LEPR signaling can cause severe early-onset

obesity and associated metabolic abnormalities. Reduced responsiveness to circulating leptin, commonly described as leptin resistance, is also investigated in obesity and metabolic disease research.

Studies involving LEPR contribute to understanding metabolic homeostasis, neuroendocrine signaling, obesity, diabetes, and cytokine receptor biology. The receptor provides an important connection between adipose tissue, central nervous system regulation, and peripheral metabolic responses. NSJ Bioreagents offers antibodies targeting proteins involved in hormonal regulation and intracellular signaling. A LEPR Antibody LEPR/4304 provides a research tool for investigating leptin receptor expression and its relationship to metabolic regulation, cellular signaling, and energy balance.

Explore our Signal Transduction Antibodies collection for additional antibodies targeting cytokine receptors, JAK/STAT signaling proteins, and regulators of intracellular signaling pathways.

## Application Notes

Optimal dilution of the LEPR Antibody LEPR/4304 / Leptin Receptor Monoclonal Antibody should be determined by the researcher.

## Immunogen

A portion of amino acids 335-425 was used as the immunogen for the LEPR Antibody LEPR/4304.

## Storage

Aliquot the LEPR Antibody LEPR/4304 and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

## Alternate Names

Leptin Receptor antibody, Ob-R antibody, CD295 antibody, Leptin Receptor Protein antibody, Leptin Receptor Long Form antibody, Leptin Receptor Short Form antibody


Copyright © NSJ Bioreagents. All rights reserved.