Anti-Leptin Receptor antibody ab5593

Overview

Product name: Anti-Leptin Receptor antibody

Description: Rabbit polyclonal to Leptin Receptor

Host species: Rabbit

Specificity: Will detect all isoforms of the leptin receptor.

Tested applications: Suitable for: IP, IHC-Fr, WB

Species reactivity: Reacts with: Mouse, Rat, Human

Immunogen: Synthetic peptide corresponding to Rat Leptin Receptor aa 577-594 (extracellular).

Sequence: KEIQWKTHEVFDAKSKSA

(Peptide available as ab5837)

Positive control: Mouse lung and brain extract, 293 whole cell lysate, Huvec cell lysate.

General notes: As per Uniprot database (P48357) OB receptor has 5 isoforms and is highly glycosylated, this means the observed band size will be different than predicted and multiple bands are expected depending upon the isoforms expressed in sample types.

Properties

Form: Liquid

Storage instructions: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

Storage buffer: Preservative: 0.05% Sodium azide
Constituent: 99% PBS

Purity: Ammonium Sulphate Precipitation

Purification notes: No concentration is available.

Clonality: Polyclonal

Isotype: IgG

Applications
Our Abpromise guarantee covers the use of ab5593 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>IP</td>
<td></td>
<td>Use at an assay dependent concentration. PubMed: 21151569</td>
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<tr>
<td>IHC-Fr</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/2000. Detects a band of approximately 100, 125 kDa. Can be blocked with Leptin Receptor peptide (ab5837). Corresponding to the long and short forms (respectively) of leptin receptor OB-R from mouse brain extract. Two smaller bands of approximately 31 and 35 kDa are also detected, which cannot be competed out with immunogenic peptide. Block with 5% milk in TBST at RT. The native leptin receptor is a homodimer held together with disulfide bonds. On a reducing SDS-PAGE, bands may appear as approximately 60 kDa subunits. Further variations in size is possible and is due to glycosylation.</td>
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**Target**

**Function**

Receptor for obesity factor (leptin). On ligand binding, mediates signaling through JAK2/STAT3. Involved in the regulation of fat metabolism and, in a hematopoietic pathway, required for normal lymphopoiesis. May play a role in reproduction. Can also mediate the ERK/FOS signaling pathway.

**Tissue specificity**

Isoform A is expressed in fetal liver and in hematopoietic tissues and choroid plexus. In adults highest expression in heart, liver, small intestine, prostate and ovary. Low level in lung and kidney.

 Isoform B is highly expressed in hypothalamus.

**Sequence similarities**

Belongs to the type I cytokine receptor family. Type 2 subfamily.

Contains 4 fibronectin type-III domains.

Contains 1 Ig-like (immunoglobulin-like) domain.

**Domain**

The cytoplasmic domain may be essential for intracellular signal transduction by activation of JAK tyrosine kinase and STATs.

The WSXWS motif appears to be necessary for proper protein folding and thereby efficient intracellular transport and cell-surface receptor binding.

The box 1 motif is required for JAK interaction and/or activation.

**Post-translational modifications**

On ligand binding, phosphorylated on two conserved C-terminal tyrosine residues (isoform B only) by JAK2. Tyr-986 is required for complete binding and activation of PTPN11, ERK/FOS activation and, for interaction with SOCS3 (By similarity). Phosphorylation on Tyr-1141 is required for STAT3 binding/activation.

**Cellular localization**

Secreted and Cell membrane.
Western blot of both short and long forms of Leptin Receptor on mouse lung tissue extract using ab5593.

**All lanes**: Anti-Leptin Receptor antibody (ab5593) at 1/2000 dilution

**Lane 1**: Mouse lung whole cell lysate

**Lane 2**: Mouse brain whole cell lysate

Lysates/proteins at 20 µg per lane.

**Secondary**

**All lanes**: Polyclonal goat anti-rabbit conjugated to HRP at 1/20000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Additional bands at**: 100 kDa (possible isoform)

**Exposure time**: 10 seconds

Blocking agent: 5% Milk for 1 hour at 23°C.

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