Product datasheet

Anti-Leptin Receptor antibody ab104403

Overview

Product name
Anti-Leptin Receptor antibody

Description
Rabbit polyclonal to Leptin Receptor

Host species
Rabbit

Tested applications
Suitable for: WB, IHC-P, ICC/IF

Species reactivity
Reacts with: Human

Predicted to work with: Macaque monkey

Immunogen
Synthetic peptide within Human Leptin Receptor aa 450-550 conjugated to keyhole limpet haemocyanin. The exact sequence is proprietary.

Database link: P48357

(Peptide available as ab115940)

Positive control
This antibody gave a positive signal in HepG2 whole cell lysate. This antibody gave a positive result in IHC in the following FFPE tissue: human normal kidney.

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
pH: 7.40
Preservative: 0.02% Sodium azide
Constituent: PBS

Purity
Immunogen affinity purified

Clonality
Polyclonal

Isotype
IgG

Applications
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.

Images
Anti-Leptin Receptor antibody (ab104403) at 1 µg/ml + HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate at 10 µg

**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 132 kDa

Observed band size: 150 kDa

why is the actual band size different from the predicted?

Additional bands at: 40 kDa, 49 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 1 minute

Leptin Receptor contains an extensive number of potential glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted.
ICC/IF image of ab104403 stained HeLa cells. The cells were 100% methanol fixed (5 min) and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab104403 at 1µg/ml overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti-rabbit (ab96899) IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

IHC image of aLeptin Receptor staining in Human normal kidney formalin fixed paraffin embedded tissue section, performed on a Leica BondTM system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab104403, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
• Valid for 12 months from date of delivery
• Response to your inquiry within 24 hours
• We provide support in Chinese, English, French, German, Japanese and Spanish
• Extensive multi-media technical resources to help you
• We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

• Guarantee only valid for products bought direct from Abcam or one of our authorized distributors