abcam

Product datasheet

Anti-RANKL antibody [12A668] - BSA and Azide free ab45039

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Overview

Product name	Anti-RANKL antibody [12A668] - BSA and Azide free
Description	Mouse monoclonal [12A668] to RANKL - BSA and Azide free
Host species	Mouse
Tested applications	**Suitable for:** ICC/IF, WB, IHC-P **Unsuitable for:** Flow Cyt
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant full length protein corresponding to Mouse RANKL aa 1-317. Database link: **O14788**
Positive control	IHC-P: Human lymph node and liver tissue. ICC/IF: HeLa (human epithelial cell line from cervix adenocarcinoma) cells. WB: Human lymph node lysate.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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 long term.
Storage buffer	pH: 7.40 Constituent: PBS
Carrier free	Yes
Purity	Protein G purified
Clonality	Monoclonal
Clone number	12A668

Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab45039 in the following tested applications.

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

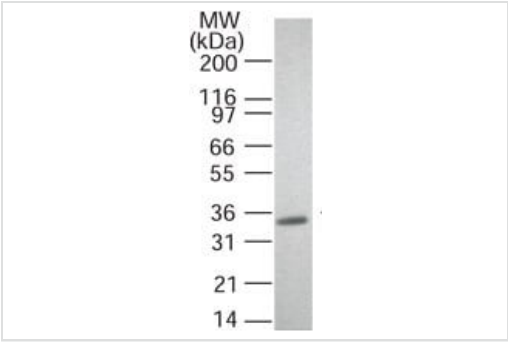
Application	Abreviews	Notes
ICC/IF		Use a concentration of 10 µg/ml.
WB	★★★★☆ (1)	Use a concentration of 1 - 2 µg/ml. Detects a band of approximately 35 kDa (predicted molecular weight: 35 kDa).
IHC-P	★★★★★ (1)	Use a concentration of 1 - 5 µg/ml.

Application notes Is unsuitable for Flow Cyt.

Target

Function	Cytokine that binds to TNFRSF11B/OPG and to TNFRSF11A/RANK. Osteoclast differentiation and activation factor. Augments the ability of dendritic cells to stimulate naive T-cell proliferation. May be an important regulator of interactions between T-cells and dendritic cells and may play a role in the regulation of the T-cell-dependent immune response. May also play an important role in enhanced bone-resorption in humoral hypercalcemia of malignancy.
Tissue specificity	Highest in the peripheral lymph nodes, weak in spleen, peripheral blood Leukocytes, bone marrow, heart, placenta, skeletal muscle, stomach and thyroid.
Involvement in disease	Defects in TNFSF11 are the cause of osteopetrosis autosomal recessive type 2 (OPTB2) [MIM:259710]; also known as osteoclast-poor osteopetrosis. Osteopetrosis is a rare genetic disease characterized by abnormally dense bone, due to defective resorption of immature bone. The disorder occurs in two forms: a severe autosomal recessive form occurring in utero, infancy, or childhood, and a benign autosomal dominant form occurring in adolescence or adulthood. Autosomal recessive osteopetrosis is usually associated with normal or elevated amount of non-functional osteoclasts. OPTB2 is characterized by paucity of osteoclasts, suggesting a molecular defect in osteoclast development.
Sequence similarities	Belongs to the tumor necrosis factor family.
Post-translational modifications	The soluble form of isoform 1 derives from the membrane form by proteolytic processing (By similarity). The cleavage may be catalyzed by ADAM17.
Cellular localization	Cytoplasm; Secreted and Cell membrane.

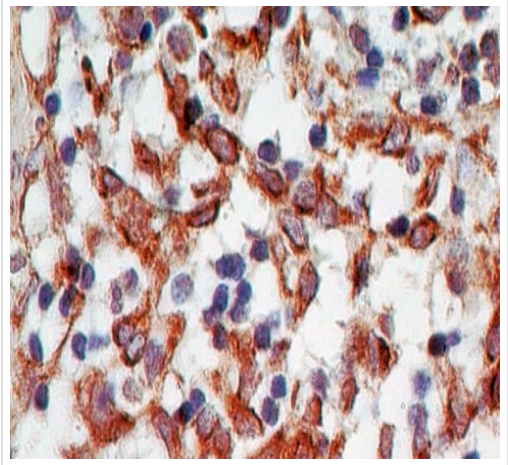
Images



Western blot - Anti-RANKL antibody [12A668] - BSA and Azide free (ab45039)

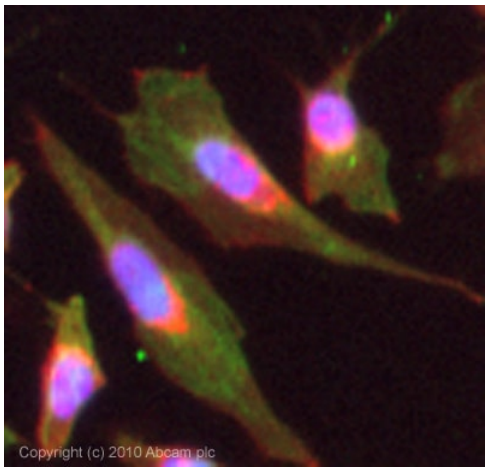
Anti-RANKL antibody [12A668] - BSA and Azide free (ab45039) at 2 µg + transfected cell lysate

Predicted band size: 35 kDa
Observed band size: 35 kDa



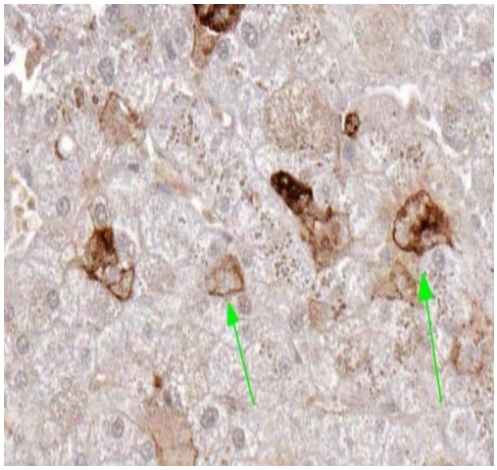
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RANKL antibody [12A668] - BSA and Azide free (ab45039)

Paraffin embedded human lymph node tissue stained for RANKL with ab45039 at 5 µg/ml.



Immunocytochemistry/ Immunofluorescence - Anti-RANKL antibody [12A668] - BSA and Azide free (ab45039)

ICC/IF image of ab45039 stained HeLa cells. The cells were 4% formaldehyde fixed (10 minutes) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1 hour to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab45039, 10 µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1 hour. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1 hour. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43 µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RANKL antibody [12A668] - BSA and Azide free (ab45039)

Paraffin embedded human liver tissue stained for RANKL with ab45039 at a 1/500 dilution. Peroxidase-conjugate and DAB chromogen. A 2 hour incubation at RT was used.

Western blot - Anti-RANKL antibody [12A668] - BSA and Azide free (ab45039)

Anti-RANKL antibody [12A668] - BSA and Azide free (ab45039) at 0.5 µg/ml + human lymph node lysate in RIPA buffer at 35 µg

Predicted band size: 35 kDa
Additional bands at: 28 kDa (possible isoform)

Band detected at ~35kDa and ~28kDa. (Expected MW of 35.5kDa according to NP_003692.1 and of 27.7kDa according to NP_143026.1)

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