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RANKL/CD254 Rabbit pAb

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Catalog # AP52035

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	O14788
Reactivity	Human, Mouse
Predicted	Rat, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35478
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human OPGL
Epitope Specificity	210-317/317
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm; Secreted and Cell membrane.
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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a member of the tumor necrosis factor (TNF) cytokine family which is a ligand for osteoprotegerin and functions as a key factor for osteoclast differentiation and activation. This protein was shown to be a dentritic cell survival factor and is involved in the regulation of T cell-dependent immune response. T cell activation was reported to induce expression of this gene and lead to an increase of osteoclastogenesis and bone loss. This protein was shown to activate antiapoptotic kinase AKT/PKB through a signaling complex involving SRC kinase and tumor necrosis factor receptor-associated factor (TRAF) 6, which indicated this protein may have a role in the regulation of cell apoptosis. Targeted disruption of the related gene in mice led to severe osteopetrosis and a lack of osteoclasts. The deficient mice exhibited defects in early differentiation of T and B lymphocytes, and failed to form lobulo-alveolar mammary structures during pregnancy. Two alternatively spliced transcript variants have been found. [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	8600
Other Names	Tumor necrosis factor ligand superfamily member 11, Osteoclast differentiation factor, ODF, Osteoprotegerin ligand, OPGL, Receptor activator of nuclear factor kappa-B ligand, RANKL, TNF-related activation-induced cytokine, TRANCE, CD254, Tumor necrosis factor ligand superfamily member 11, membrane form, Tumor necrosis factor ligand superfamily member 11, soluble form, TNFSF11, OPGL, RANKL, TRANCE
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1 g/Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	TNFSF11 (HGNC:11926)
Synonyms	OPGL, RANKL, TRANCE
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 (PubMed:22664871). Induces osteoclastogenesis by activating multiple signaling pathways in osteoclast precursor cells, chief among which is induction of long lasting oscillations in the intracellular concentration of Ca (2+) resulting in the activation of NFATC1, which translocates to the nucleus and induces osteoclast-specific gene transcription to allow differentiation of osteoclasts. During osteoclast differentiation, in a TMEM64 and ATP2A2-dependent manner induces activation of CREB1 and mitochondrial ROS generation necessary for proper osteoclast generation (By similarity).
Cellular Location	[Isoform 1]: Cell membrane; Single-pass type II membrane protein [Isoform 2]: Cytoplasm.
Tissue Location	Highest in the peripheral lymph nodes, weak in spleen, peripheral blood Leukocytes, bone marrow, heart, placenta, skeletal muscle, stomach and thyroid

Background

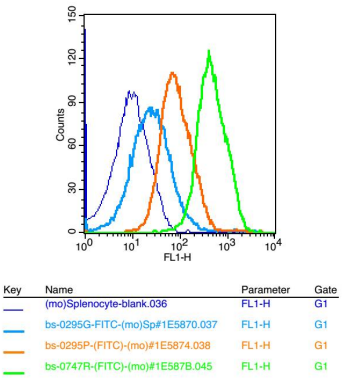
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

References

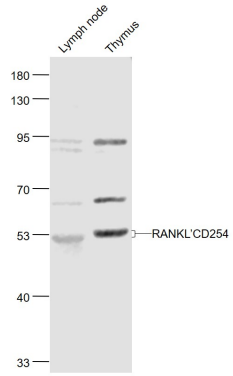
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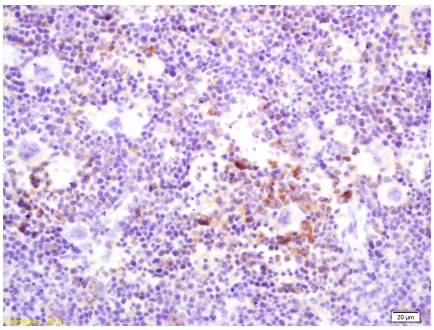
Images



Blank control: mouse splenocytes(blue)
Isotype Control Antibody: Rabbit IgG(orange) ;
Secondary Antibody: Goat anti-rabbit IgG-FITC(white blue),
Dilution: 1:100 in 1 X PBS containing 0.5% BSA ;
Primary Antibody Dilution: 1 µl in 100 µL1X PBS containing 0.5% BSA(green).



Sample:
Lymph node(Mouse) Lysate at 40 ug
Thymus(Mouse) Lysate at 40 ug
Primary: Anti-RANKL'CD254 (AP52035) at 1/500 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 37'50 kD
Observed band size: 50 kD



Tissue/cell: mouse spleen tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-OPGL/RANKL/ODF Polyclonal Antibody, Unconjugated(AP52035) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.