10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

OPG Rabbit pAb

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Catalog # AP52031

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	O00300
Reactivity	Rat, Human, Mouse
Predicted	Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46026
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human OPG
Epitope Specificity	221-300/401
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	Secreted.
DISEASE	Defects in TNFRSF11B are the cause of juvenile Paget disease (JPD) [MIM:239000]; also known as hyperostosis corticalis deformans juvenilis or hereditary hyperphosphatasia or chronic congenital idiopathic hyperphosphatasia. JPD is a rare autosomal recessive osteopathy that presents in infancy or early childhood. The disorder is characterized by rapidly remodeling woven bone, osteopenia, debilitating fractures, and deformities due to a markedly accelerated rate of bone remodeling throughout the skeleton. Approximately 40 cases of JPD have been reported worldwide. Unless it is treated with drugs that block osteoclast-mediated skeletal resorption, the disease can be fatal.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Osteoprotegerin (OPG, or osteoclastogenesis inhibitory factor) is a secretory glycoprotein belonging to TNF receptor superfamily. Acts as decoy receptor for RANKL and thereby neutralizes its function in osteoclastogenesis. Inhibits the activation of osteoclasts and promotes osteoclast apoptosis. Bone homeostasis seems to depend on the local RANKL/OPG ratio. May also play a role in preventing arterial calcification. May act as decoy receptor for TRAIL and protect against apoptosis. TRAIL binding blocks the inhibition of osteoclastogenesis. OPG acts as a soluble factor in the regulation of bone mass and may be beneficial in the treatment of osteoporosis with increased osteoclast activity. OPG consists of 401 amino acids with a molecular weight of 44 kDa as a monomer and 90 kDa as a disulphide-linked dimer.

Additional Information

Gene ID	4982

Other Names	Tumor necrosis factor receptor superfamily member 11B, Osteoclastogenesis inhibitory factor, Osteoprotegerin, TNFRSF11B, OCIF, OPG
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	TNFRSF11B
Synonyms	OCIF, OPG
Function	Acts as a decoy receptor for TNFSF11/RANKL and thereby neutralizes its function in osteoclastogenesis. Inhibits the activation of osteoclasts and promotes osteoclast apoptosis in vitro. Bone homeostasis seems to depend on the local ratio between TNFSF11 and TNFRSF11B. May also play a role in preventing arterial calcification. May act as decoy receptor for TNFSF10/TRAIL and protect against apoptosis. TNFSF10/TRAIL binding blocks the inhibition of osteoclastogenesis.
Cellular Location	Secreted.
Tissue Location	Highly expressed in adult lung, heart, kidney, liver, spleen, thymus, prostate, ovary, small intestine, thyroid, lymph node, trachea, adrenal gland, testis, and bone marrow. Detected at very low levels in brain, placenta and skeletal muscle. Highly expressed in fetal kidney, liver and lung

Background

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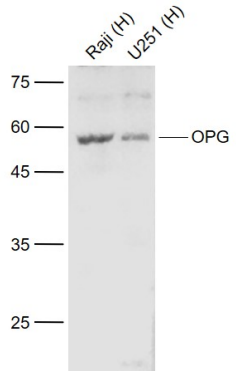
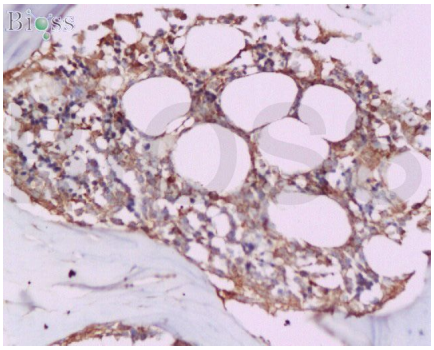
References

Simonet W.S.,et al.Cell 89:309-319(1997).
Mizuno A.,et al.Gene 215:339-343(1998).
Min H.,et al.J. Exp. Med. 192:463-474(2000).
Nelson C.A.,et al.Structure 20:1971-1982(2012).

Images

Sample:
Lane 1: Raji (Human) Cell Lysate at 30 ug
Lane 2: U251 (Human) Cell Lysate at 30 ug
Primary: Anti-OPG (AP52031) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 55 kD
Observed band size: 55 kD





Tissue/cell: rat tibia 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-Osteoprotegerin Polyclonal Antibody, Unconjugated(AP52031) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining