SunLong Biotech Co.,LTD
Tel: 0086-571- 56623320 Fax:0086-571- 56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-OPG antibody

SL0431R

Product Name:	OPG
Chinese Name:	骨保护蛋白/护骨素抗体
Alias:	MGC29565; OCIF; OPG; Osteoclastogenesis Inhibitory Factor; TNFRSF 11B; TNFRSF11B; TR 1; TR1; Tumor Necrosis Factor Receptor Superfamily Member 11b; TR11B_HUMAN.
文献引用 PubMed :	**Specific References(12)**|SL0431R has been referenced in 12 publications. **[IF=1.72]**Li, Ping. "Efficacy and Safety of Echinacoside in a Rat Osteopenia Model." Evidence-Based Complementary and Alternative Medicine 2013 (2013).**Rat**. PubMed:23573159 **[IF=1.98]**Yu, Xijiao, et al. "Expression of neuropeptides and bone remodeling-related factors during periodontal tissue regeneration in denervated rats." Journal of Molecular Histology: 1-9.**WB;Rat**. PubMed:25663522 **[IF=1.88]**Li, Xianxian, et al. "Oral administration of 5-Hydroxytryptophan aggravated periodontitis-induced alveolar bone loss in rats." Archives of Oral Biology(2015).**IHC-P;Rat**. PubMed:25766472 **[IF=1.27]**Zhang, Yuanyu, et al. "Mycobacterium tuberculosis 10-kDa co-chaperonin regulates the expression levels of receptor activator of nuclear factor-κB ligand and osteoprotegerin in human osteoblasts." Experimental and therapeutic medicine 9.3 (2015): 919-924.**WB;Human**. PubMed:25667654

	[IF=2.99]Herath, Steven C., et al. "Stimulation of angiogenesis by cilostazol accelerates fracture healing in mice." Journal of Orthopaedic Research (2015).**WB;Mouse**. PubMed:26134894 [IF=2.09]Chen, Zhiguang, et al. "Curcumin alleviates glucocorticoid-induced osteoporosis through the regulation of the Wnt signaling pathway."International Journal of Molecular Medicine (2016).**WB;Rat**. PubMed:26677102 [IF=2.62]Zhang, Xiaonan, et al. "Ginsenosides Rg3 attenuates glucocorticoid-induced osteoporosis through regulating BMP-2/BMPR1A/Runx2 signaling pathway."Chemico-Biological Interactions (2016).**WB;Rat**. PubMed:27387537 [IF=2.68]Xiao, Wanan, et al. "Bone fracture healing is delayed in splenectomic rats." Life Sciences (2016).**WB;Rat**. PubMed:27956350 [IF=1.60]He, Ming, et al. "Effect of glucocorticoids on osteoclast function in a mouse model of bone necrosis." Molecular medicine reports 14.2 (2016): 1054-1060.**Mouse**. PubMed:27277157 [IF=2.66]Yu, X., et al. "Denervation effectively aggravates rat experimental periodontitis." Journal of Periodontal Research (2017). **WB;Rat**. PubMed:28621056 [IF=3.08]Zhan, Fu-Liang, Xin-Yang Liu, and Xing-Bo Wang. "The Role of MicroRNA-143-5p in the Differentiation of Dental Pulp Stem Cells into Odontoblasts by Targeting Runx2 via the OPG/RANKL Signaling Pathway." Journal of Cellular Biochemistry (2017).**WB;Human**. PubMed:28608628 [IF=1.75]Chen, Helin, et al. "Intermittent administration of parathyroid hormone ameliorated alveolar bone loss in experimental periodontitis in streptozotocin-induced diabetic rats." Archives of Oral Biology (2017).**IHC-P;Rat**. PubMed:0
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Cow,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-

	500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	43kDa
Cellular localization:	Secretory protein
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human OPG:221-300/401
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.
PubMed:	PubMed
Product Detail:	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. **Function:** Acts as decoy receptor for 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 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. **Subunit:** Homodimer. **Subcellular Location:** Secreted. **Tissue Specificity:** 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.

Post-translational modifications:
N-glycosylated. Contains sialic acid residues.
The N-terminus is blocked.

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.

Similarity:
Contains 2 death domains.
Contains 4 TNFR-Cys repeats.

SWISS:
O08712

Gene ID:
4982

Database links:

Entrez Gene: 4982Human

Omim: 602643Human

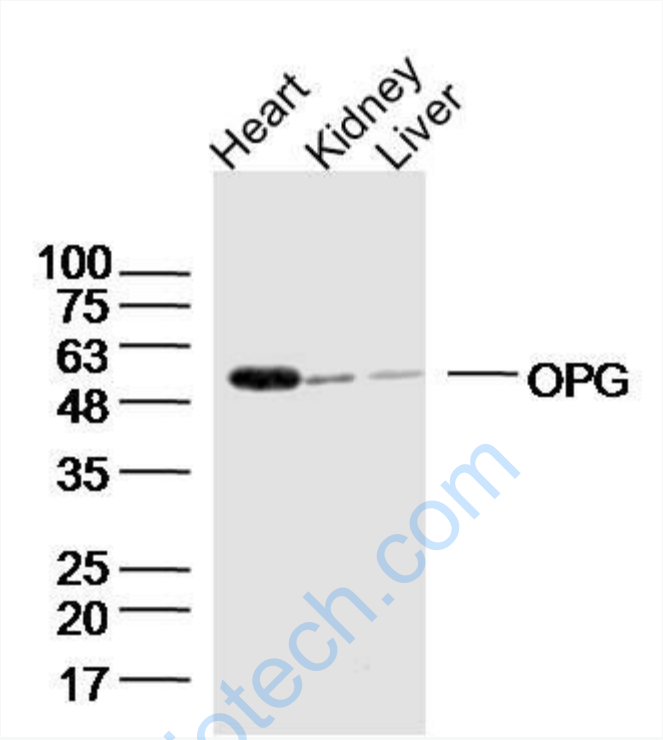
SwissProt: O00300Human

Unigene: 81791Human

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

护骨素又称护骨因子(osteorotegenin,OPG)、骨保护蛋白、破骨细胞生成抑制因子、骨保护素、破骨细胞抑制生成因子(osteoclastogenesis inhibitory factor，OCIF)
OPG属于TNF受体超家族，主要功能是抑制破骨细胞的分化、成熟破骨细胞的骨吸收活性，并诱导其凋亡。

Picture:



Sample:

Heart (Mouse) Lysate at 40 ug

Kidney (Mouse) Lysate at 40 ug

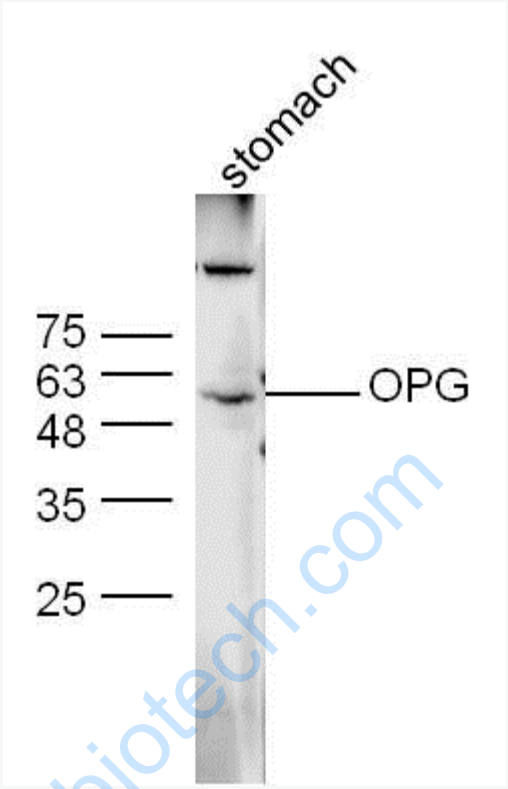
Liver (Mouse) Lysate at 40 ug

Primary: Anti-OPG(SL0431R)at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 43kD

Observed band size: 50kD



Sample:

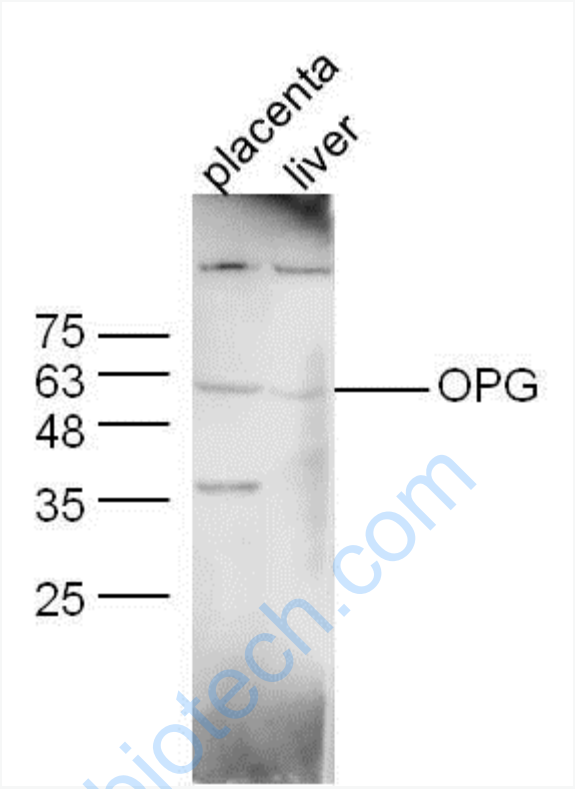
Stomach (Mouse) Lysate at 40 ug

Primary: Anti-OPG (SL0431R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 43 kD

Observed band size: 60 kD



Sample:

Placenta (Mouse) Lysate at 40 ug

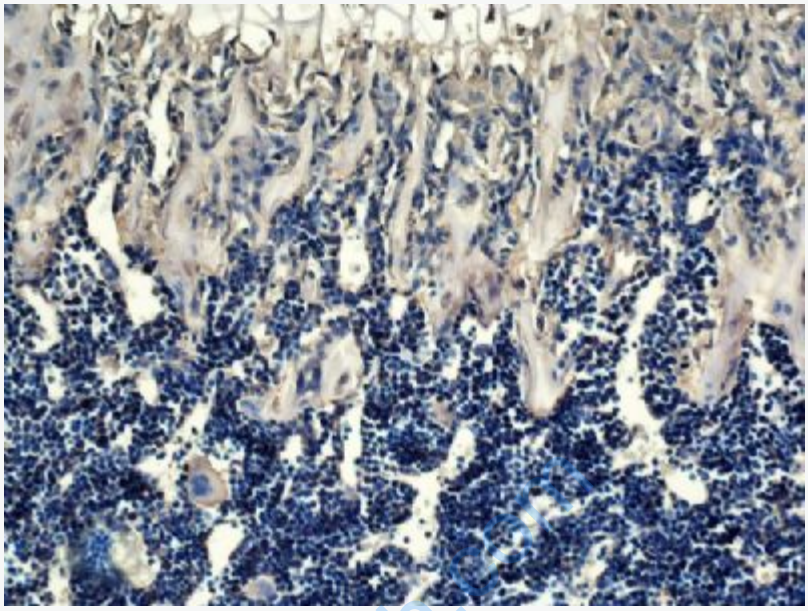
Liver (Mouse) Lysate at 40 ug

Primary: Anti-OPG (SL0431R) at 1/300 dilution

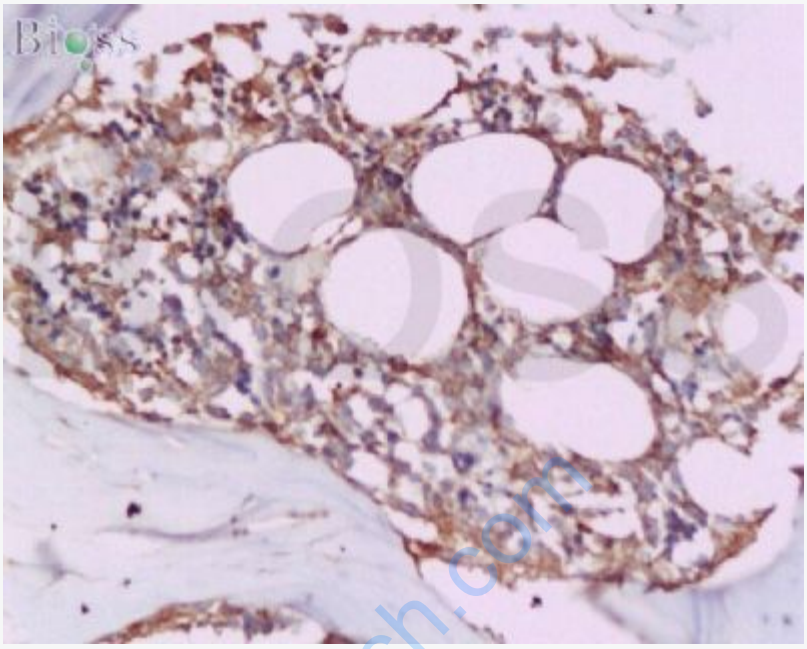
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 43 kD

Observed band size: 60 kD



Generously provided by Markus Linder from Medical University Vienna as part of the Bioss Discovery Program. Formalin-fixed, paraffin embedded, and decalcified in EDTA mouse bone labeled with Anti-OPG Polyclonal Antibody, Unconjugated (SL0431R) at 1:100 followed by conjugation to the secondary antibody and DAB staining



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(SL0431R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining