Mouse Osteoprotegerin/TNFRSF11B Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: BAF459

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Osteoprotegerin/TNFRSF11B in ELISAs and Western blots. In sandwich immunoassays, less than 0.2% cross-reactivity with recombinant mouse RANK is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Osteoprotegerin/TNFRSF11B Gln21-Leu401 (Gln138Arg) Accession # Q6PI12
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

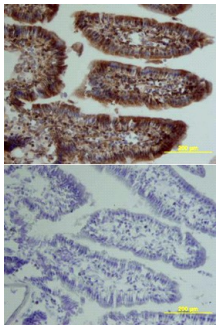
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse Osteoprotegerin/TNFRSF11B Fc Chimera (Catalog # 459-MO)
Immunohistochemistry	5-15 µg/mL	See Below
Mouse Osteoprotegerin/TNFRSF11B Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Mouse Osteoprotegerin/TNFRSF11B Antibody (Catalog # MAB4591)
ELISA Detection	0.1-0.4 µg/mL	Mouse Osteoprotegerin/TNFRSF11B Biotinylated Antibody (Catalog # BAF459)
Standard		Recombinant Mouse Osteoprotegerin/TNFRSF11B Fc Chimera (Catalog # 459-MO)

DATA

Immunohistochemistry



Osteoprotegerin/TNFRSF11B in Mouse Intestine. Osteoprotegerin/TNFRSF11B was detected in perfusion fixed frozen sections of mouse intestine using Goat Anti-Mouse Osteoprotegerin/TNFRSF11B Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF459) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Osteoprotegerin (OPG)/Osteoclastogenesis Inhibitory Factor (OCIF) is member of the tumor necrosis factor receptor superfamily that lacks any apparent cell-association motifs and exists as a soluble secreted protein. In the new TNF superfamily nomenclature, OPG is referred to as TNFRSF11B. OPG was originally isolated by sequence homology as a TNF receptor family protein during a fetal rat intestine cDNA-sequencing project and subsequently shown to be involved in the regulation of bone density. OCIF was initially purified from the conditioned medium of human embryonic fibroblasts based on its ability to inhibit osteoclast development. Comparison of the amino-acid sequences of human OPG and OCIF proteins revealed their identity. The amino-terminal half of OPG contains four cysteine-rich repeats characteristic of TNF receptor family members. The carboxy-terminal of OPG/OCIF was found to contain two death domain homologous regions in tandem. Human and mouse OPG share approximately 84% and 94% amino acid sequence identity, respectively, with the rat OPG. Natural OPG/OCIF has been found to exist predominantly as disulfide-linked dimers. Two TNF superfamily ligands, including the membrane proteins OPG ligand/TRANCE (tumor necrosis factor-related activation-induced cytokine)/ODF (osteoclast differentiation factor)/RANKL (receptor activator of NF-kappaB ligand) and TRAIL (TNF-related apoptosis-inducing ligand)/APO-2 ligand, have been shown to be the cellular ligands for OPG/OCIF. Each of these ligands has been shown to interact with additional TNF receptor family members, including RANK (with TRANCE) and TRAIL receptors 1-4 (with TRAIL). The roles of these receptor-ligands in osteoclastogenesis, apoptosis and in the immune system remains to be elucidated.

References:

1. Lacey, D.L. *et al.* (1998) Cell **93:**165.
2. Emery, J.G. *et al.* (1998) J. Biol. Chem. **273:**14363.
3. Yasuda, H. *et al.* (1998) Proc. Natl. Acad. Sci. USA **95:**3597.

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