Mouse Osteoprotegerin/TNFRSF11B Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF459

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Osteoprotegerin in direct ELISAs and Western blots. In direct ELISAs, approximately 40% cross-reactivity with recombinant human Osteoprotegerin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Osteoprotegerin/TNFRSF11B Glu22-Leu401 with a Gln138Arg substitution Accession # Q6PI12
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

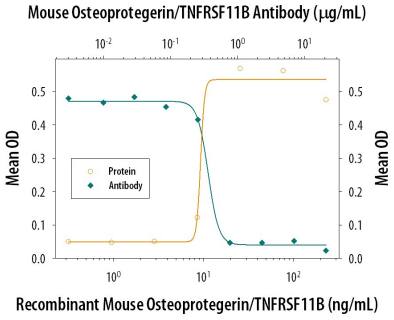
APPLICATIONS

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
Neutralization	Measured by its ability to neutralize Osteoprotegerin/TNFRSF11B-mediated inhibition of TRAIL/TNFSF10-induced cytotoxicity in the L-929 mouse fibroblast cell line. The Neutralization Dose (ND_{50}) is typically 0.5-2 µg/mL in the presence of 0.1 µg/mL Recombinant Mouse Osteoprotegerin/TNFRSF11B Fc Chimera, 20 ng/mL Recombinant Human TRAIL, and 1 µg/mL actinomycin D.	

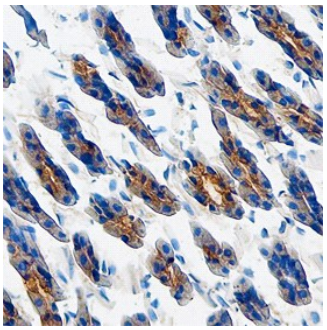
DATA

Neutralization



Osteoprotegerin/TNFRSF11B Inhibition of TRAIL/TNFSF10-induced Cytotoxicity and Neutralization by Mouse Osteoprotegerin/TNFRSF11B Antibody. In the presence of the metabolic inhibitor actinomycin D (1 µg/mL), Recombinant Mouse OPG/TNFRSF11B Fc Chimera (Catalog # 459-MO) inhibits Recombinant Human TRAIL/TNFSF10 (Catalog # 375-TL) induced cytotoxicity in the L-929 mouse fibroblast cell line in a dose-dependent manner (orange line), as measured by crystal violet staining. Under these conditions, inhibition of Recombinant Human TRAIL/TNFSF10 (20 ng/mL) activity elicited by Recombinant Mouse OPG/TNFRSF11B Fc Chimera (0.1 µg/mL) is neutralized (green line) by increasing concentrations of Mouse OPG/TNFRSF11B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF459). The ND_{50} is typically 0.5-2 µg/mL.

Immunohistochemistry



Osteoprotegerin/TNFRSF11B in Mouse Stomach. Osteoprotegerin/TNFRSF11B was detected in perfusion fixed frozen sections of mouse stomach using Goat Anti-Mouse Osteoprotegerin/TNFRSF11B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF459) at 5 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). Specific staining was localized to glandular epithelial cells. 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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Mouse Osteoprotegerin/TNFRSF11B Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF459

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.

bio-techne
bio-techne.com

Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 **Europe | Middle East | Africa** TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956