

Anti-Osteoprotegerin Antibody [9C1]

EM1701-98



Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell
Molecular Wt:	Predicted band size: 46 kDa
Clone number:	9C1

Description: Bone morphogenesis and remodeling involve the formation of bone from osteoblasts and the resorption of bone by osteoclasts. The cytokine osteoprotegerin (OPG), also designated osteoclastogenesis inhibitory factor (OCIF), is known to inhibit osteoclast formation. A secreted glycoprotein, OPG is a member of the TNF receptor family that increases bone density and volume. OPG is thought to inhibit osteoclastogenesis by disrupting the cell-to-cell signaling between osteoblastic stromal cells and osteoclast progenitors. OPG is known to bind to TRAIL, a death domain-containing protein, and to inhibit TRAIL apoptosis in Jurkat cells. OPG also binds to osteoclast differentiation factor (ODF), also known as TRANCE/RANKL, a membrane-bound protein belonging to the TNF ligand family. Both TNF α and TNF β upregulate OPG expression, while the bone resorbing agent prostaglandin E2 downregulates OPG.

Immunogen: Recombinant protein within Human Osteoprotegerin aa 1-401 / 401.

Positive control: MG-63 cell lysate, Human liver tissue lysate, Mouse kidney tissue lysate, Rat heart tissue lysate, mouse kidney tissue, 293.

Subcellular location: Secreted.

Database links: SwissProt: O00300 Human | O08712 Mouse | O08727 Rat

Recommended Dilutions:

WB	1:500-1:2,000
IHC-P	1:1,000
IF-Cell	1:50

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein G affinity purified.

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Orders:0086-571-88062880

Technical:0086-571-89986345

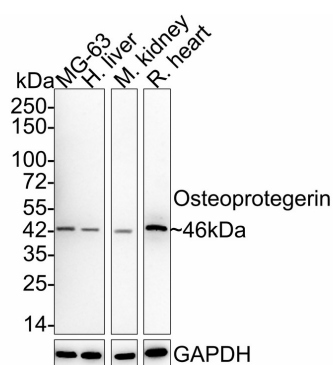
Service mail:support@huabio.cn

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Images

Fig1: Western blot analysis of Osteoprotegerin on different lysates with Mouse anti-Osteoprotegerin antibody (EM1701-98) at 1/2,000 dilution.

Lane 1: MG-63 cell lysate
Lane 2: Human liver tissue lysate
Lane 3: Mouse kidney tissue lysate
Lane 4: Rat heart tissue lysate



Lysates/proteins at 30 µg/Lane.

Predicted band size: 46 kDa
Observed band size: 46 kDa

Exposure time: 3 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (EM1701-98) at 1/2,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

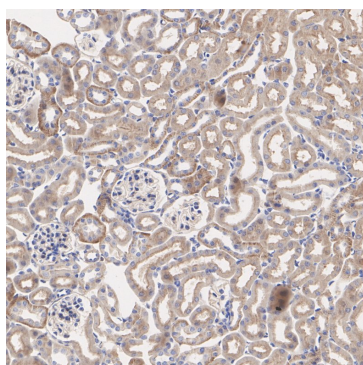


Fig2: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Mouse anti-Osteoprotegerin antibody (EM1701-98) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (EM1701-98) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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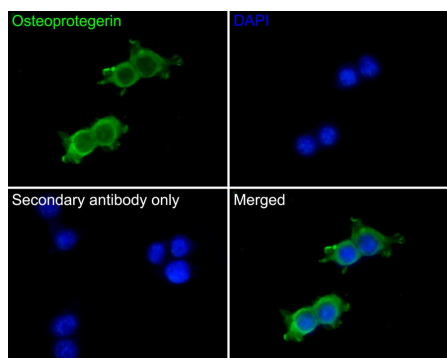


Fig3: Immunocytochemistry analysis of 293 cells labeling Osteoprotegerin with Mouse anti-Osteoprotegerin antibody (EM1701-98) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 30 minutes, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes, and then blocked with 2% BSA for 30 minutes at room temperature. Cells were then incubated with Mouse anti-Osteoprotegerin antibody (EM1701-98) at 1/50 dilution in 2% BSA overnight at 4 °C. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Tsuda E et al. Isolation of a novel cytokine from human fibroblasts that specifically inhibits osteoclastogenesis. *Biochem Biophys Res Commun* 234:137-142 (1997).
2. Luan X et al. Crystal structure of human RANKL complexed with its decoy receptor osteoprotegerin. *J Immunol* 189:245-252 (2012).

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