

## Anti-Human Osteoprotegerin Antibody [PSH13-31] - BSA and Azide free (Capture)

# HA725067



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	ELISA(Cap)
<b>Clone number:</b>	PSH13-31

**Description:** 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. An autosomal recessive, juvenile-onset form of Paget disease, a disorder of bone remodeling characterized by increased bone turnover affecting one or more sites throughout the skeleton, primarily the axial skeleton. Osteoclastic overactivity followed by compensatory osteoblastic activity leads to a structurally disorganized mosaic of bone (woven bone), which is mechanically weaker, larger, less compact, more vascular, and more susceptible to fracture than normal adult lamellar bone. PDB5 clinical manifestations include short stature, progressive long bone deformities, fractures, vertebral collapse, skull enlargement, and hyperostosis with progressive deafness.

**Immunogen:** Recombinant protein within Human Osteoprotegerin aa 22-401 (HA210977).

**Positive control:** Recombinant Human Osteoprotegerin protein (HA210977).

**Subcellular location:** Secreted.

**Database links:** SwissProt: O00300 Human

**Recommended Dilutions:**

**ELISA(Cap)** Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH13-32] to Human Osteoprotegerin antibody (Detector) (HA725068) and Recombinant Human Osteoprotegerin protein (HA210977) as the standard. The reference range value is 62.5-8,000 pg/mL.

**Storage Buffer:** 1\*PBS (pH7.4).

**Storage Instruction:** Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

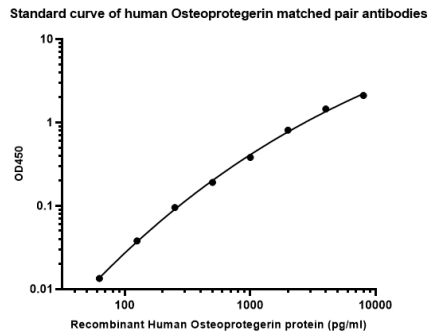
Service mail:support@huabio.cn

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**Fig1:** Sandwich ELISA analysis of Human Osteoprotegerin matched pair antibodies

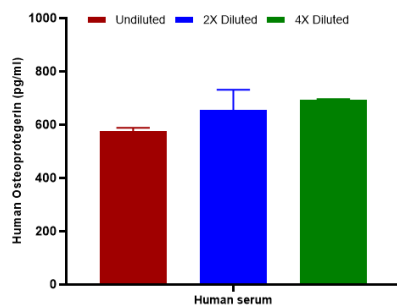
Capture: HA725067, Human Osteoprotegerin Rabbit mAb [PSH13-31]

Detector: HA725068, Human Osteoprotegerin Rabbit mAb [PSH13-32]



Elisa assay was performed by coating wells of a 96-well plate with 50  $\mu$ l per well of capture antibody (HA725067) diluted in carbonate/bicarbonate buffer, at a concentration of 5  $\mu$ g/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150  $\mu$ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human Osteoprotegerin protein (HA210977) starting from 8,000 pg/ml to 0 pg/ml and detect antibody (HA725068, Biotin, 0.2  $\mu$ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 50  $\mu$ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

**Fig2:** Interpolated concentrations of native Osteoprotegerin in human serum samples.



Capture: HA725067, Human Osteoprotegerin Rabbit mAb [PSH13-31]

Detector: HA725068, Human Osteoprotegerin Rabbit mAb [PSH13-32]

The concentrations of Osteoprotegerin were measured in duplicates, interpolated from the Osteoprotegerin standard curve and corrected for sample dilution. Undiluted samples are human serum 100%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean Osteoprotegerin concentration was determined to be 641 pg/ml in human serum.

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

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### Background References

1. Luan X., Lu Q., Jiang Y., Zhang S., Wang Q., Yuan H., Zhao W., Wang J., Wang X. Crystal structure of human RANKL complexed with its decoy receptor osteoprotegerin. *J. Immunol.* 189:245-252 (2012)
2. Tsuda E., Goto M., Mochizuki S., Yano K., Kobayashi F., Morinaga T., Higashio K. Isolation of a novel cytokine from human fibroblasts that specifically inhibits osteoclastogenesis. *Biochem. Biophys. Res. Commun.* 234:137-142 (1997)

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