abcam

Product datasheet

Human Osteoprotegerin ELISA Kit ab100617

15 References 4 Images

Overview

Product name	Human Osteoprotegerin ELISA Kit
Detection method	Colorimetric
Sample type	Cell culture supernatant, Serum, Plasma, Cell Lysate
Assay type	Sandwich (quantitative)
Sensitivity	< 1 pg/ml
Range	1.23 pg/ml - 900 pg/ml
Recovery	100 %

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	99.75	89% - 108%
Serum	99.85	89% - 108%
Plasma	102.45	90% - 109%

Assay duration	Multiple steps standard assay
Species reactivity	**Reacts with:** Human
Product overview	Abcam's Osteoprotegerin Human ELISA (Enzyme-Linked Immunosorbent Assay) kit is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of Human Osteoprotegerin in serum, plasma, and cell culture supernatants. This assay employs an antibody specific for Human Osteoprotegerin coated on a 96-well plate. Standards and samples are pipetted into the wells and Osteoprotegerin present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human Osteoprotegerin antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of Osteoprotegerin bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm. Get results in 90 minutes with Human Osteoprotegerin ELISA Kit (**ab189580**) from our

SimpleStep ELISA® range.

Produced using a non-baculovirus expression system.

Notes

Optimization may be required with urine samples.

We recommend preparing serum-free or low-serum medium samples, as serum tends to contain cytokines which may produce significant background signals. If it is necessary to test serum-containing medium, we recommend also running an uncultured media blank to assess baseline signals. This baseline can then be subtracted from the cultured media sample data.

Platform

Microplate

Properties

Storage instructions

Store at -20°C. Please refer to protocols.

Components	1 x 96 tests
20X Wash Buffer	1 x 25ml
5X Assay Diluent B	1 x 15ml
500X HRP-Streptavidin Concentrate	1 x 200µl
Assay Diluent A	1 x 30ml
Biotinylated anti-Human Osteoprotegerin	2 vials
Osteoprotegerin Microplate (12 x 8 wells)	1 unit
Recombinant Human Osteoprotegerin Standard (lyophilized)	2 vials
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml

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.

Tissue specificity

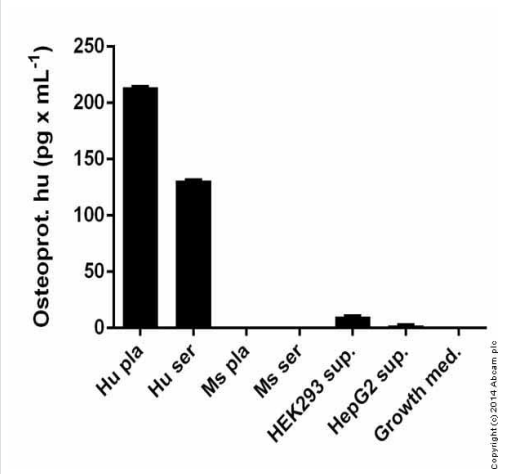
Highly expressed in adult lung, heart, kidney, liver, spleen, thymus, prostate, ovary, small intestine, thyroid, lymph node, trachea, adrenal gland, testis, and bone marrow. Detected at very low levels in brain, placenta and skeletal muscle. Highly expressed in fetal kidney, liver and lung.

Involvement in disease

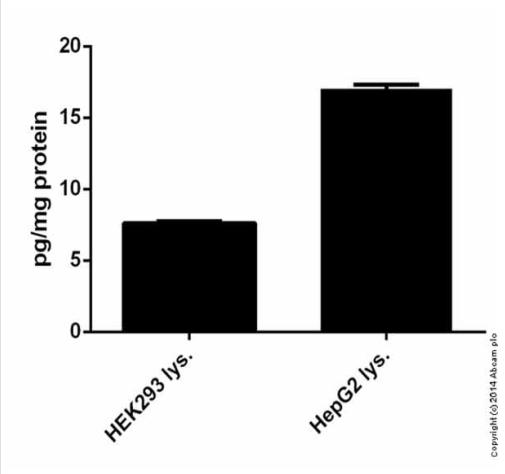
Defects in TNFRSF11B are the cause of juvenile Paget disease (JPD) [MIM:239000]; also known as hyperostosis corticalis deformans juvenilis or hereditary hyperphosphatasia or chronic congenital idiopathic hyperphosphatasia. JPD is a rare autosomal recessive osteopathy that presents in infancy or early 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.

Sequence similarities	Contains 2 death domains. Contains 4 TNFR-Cys repeats.
Post-translational modifications	N-glycosylated. Contains sialic acid residues. The N-terminus is blocked.
Cellular localization	Secreted.

Images

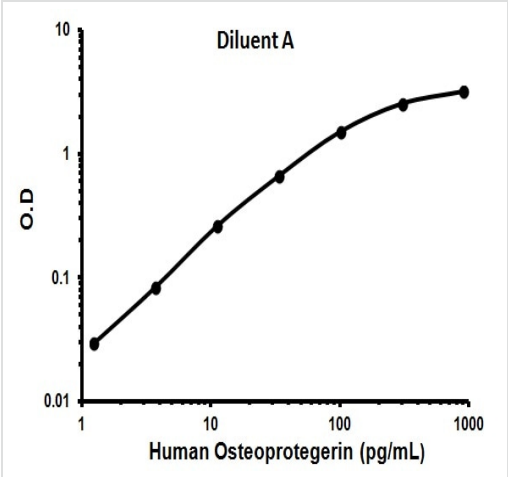


Osteoprotegerin Human ELISA Kit - ab100617



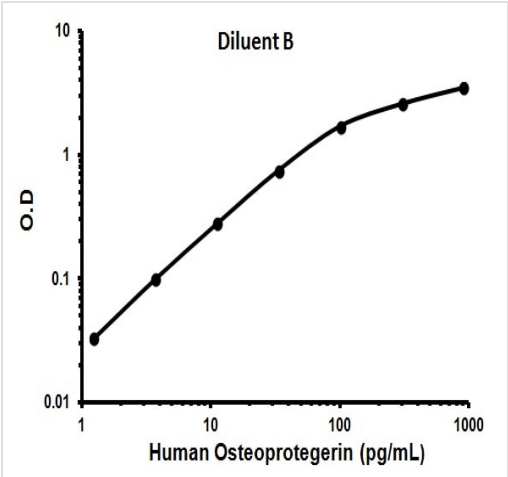
Osteoprotegerin Human ELISA Kit -ab100617

Osteoprotegerin measured in cell lysates showing quantity (pg) per mg of tested sample



Typical Standard Curve

Representative Standard Curve using ab100617.



Typical Standard Curve

Representative Standard Curve using ab100617.

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