Human Osteoprotegerin,OPG ELISA KIT

Product Code	CSB-E04692h
Abbreviation	TNFRSF11B
Protein Biological Process 1	Apoptosis/Autophagy
Target Name	tumor necrosis factor receptor superfamily, member 11b
Uniprot No.	O00300
Alias	MGC29565, OCIF, OPG, TR1, osteoclastogenesis inhibitory factor|osteoprotegerin
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Protein Biological Process 3	Apoptosis
Sample Types	serum, plasma, tissue homogenates
Detection Range	7.8 pg/mL-500 pg/mL
Sensitivity	1.95 pg/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Cell Biology
Gene Names	TNFRSF11B
Tag Info	quantitative
Protein Description	Sandwich
Description	The human OPG ELISA Kit allows for the in vitro quantitative determination of OPG concentrations in serum, plasma, or tissue homogenates. This kit exclusively recognizes human OPG. OPG, also known as TNFRSF11B, is closely involved in bone remodeling through interaction with RANKL. OPG-RANKL interaction inhibits the maturation and activation of pre-osteoclasts by antagonizing RANK-RANKL signaling thereby suppressing osteoclast function and facilitating bone formation. Declined OPG expression or an imbalanced RANKL/OPG ratio leads to osteoporosis, periodontitis, and rheumatoid arthritis. In addition to its role in bone homeostasis, OPG is implicated in various physiological and pathological processes, such as immune regulation, vascular function, and fibrosis. OPG-TRAIL signaling prevents the induction of apoptosis. OPG expression has also been found in various cancer types and is associated

	with tumor survival, epithelial to mesenchymal transition (EMT), neo-angiogenesis, invasion, and metastasis. The detection mechanism of this kit is based on the Sandwich-ELISA technique. OPG in the sample is bound to the capture antibody immobilized on the microtiter plate and then sandwiched with a Biotin-labeled OPG antibody. The solution color develops into blue after the ordinal addition of HRP-avidin and TMB. The color development is terminated after adding the stop solution, and the color turns from blue to yellow. The color intensity is positively correlated with OPG content in the sample. The kit has been quality-controlled with high sensitivity, strong specificity, good linearity, high precision, high recovery, and high lot-to-lot consistency.
Target Details	This protein is a member of the TNF-receptor superfamily. This protein is an osteoblast-secreted decoy receptor that functions as a negative regulator of bone resorption. This protein specifically binds to its ligand, osteoprotegerin ligand, both of which are key extracellular regulators of osteoclast development. Studies of the mouse counterpart also suggest that this protein and its ligand play a role in lymph-node organogenesis and vascular calcification. Alternatively spliced transcript variants of this gene have been reported, but their full length nature has not been determined.
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