PA159X

OriGene Technologies Inc.

9620 Medical Center Drive, Ste 200
Rockville, MD 20850
UNITED STATES
Phone: +1-888-267-4436
Fax: +1-301-340-8606
techsupport@origene.com

OriGene EU

Acris Antibodies GmbH
Schillerstr. 5
32052 Herford
GERMANY
Phone: +49-5221-34606-0
Fax: +49-5221-34606-11
info@acris-antibodies.com

Recombinant Human Osteoprotegerin -Purified

Alternate names: OCIF, OPG, Osteoclastogenesis inhibitory factor, Tumor necrosis factor receptor superfamily member 11B

Catalog No.: PA159X

Quantity: 50 µg

Background: Osteoprotegerin (OPG) is a member of the TNFR superfamily that can act as a decoy receptor for RANKL. Binding of soluble OPG to sRANKL inhibits osteoclastogenesis by interrupting the signaling between stromal cells and osteoclastic progenitor cells, thereby leading to excess accumulation of bone and cartilage. OPG is expressed in a wide variety of tissues including adult heart, lung, kidney, liver, spleen, prostate, lymph node and bone marrow. OPG is secreted both as a monomeric and a dimeric protein. Its primary structure consists of seven distinct domains, four of which corresponds to the extracellular cysteine-rich domains of TNFR proteins and constitutes the soluble OPG.

Uniprot ID: O00300

NCBI: NP_002537.3

GeneID: 4982

Species: Human

Source: E. coli

Format:
State: Lyophilized (sterile filtered) purified fraction
Purity: >98% pure by SDS-PAGE and HPLC analyses
Buffer System: 10mM Sodium Phosphate, pH 7.5
Endotoxin Level: < 0.1 ng per µg (1EU/µg)
Reconstitution: Restore in water to a concentration of 0.1-1.0 mg/ml.
This solution can then be diluted into other aqueous buffers and stored at 2-8°C for 1 week or -20°C for future use.

Description: Recombinant Human OPG is a soluble 20.0 kDa protein containing 174 amino acid residues.
AA Sequence:
METFPPKYLH YDEETSHQLL CDKCPPGTYL KQHCTAKWKT VCAPCPDHYY TDSWHTSDEC LYCSPVCKEL QYVKQECNRT HNRVCECKEG RYLEIEFCLK HRSCPPGFGV VQAGTPERNT VCKRCPDGFF SNETSSKAPC RKHTNCSVFG LLLTQKGNAT HDNICSGNSE STQK
Biological Activity: Determined by its ability to inhibit TRAIL-induced apoptosis of LN-18 glioblastoma cells.
Molecular weight: 20.0 kDa

Add. Information: Centrifuge the vial prior to opening!

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.
After reconstitution store the antibody undiluted at 2-8°C for one month
or (in aliquots) at -20°C long term.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Zhu, J. Implications for osteolytic bone metastases. The Journal of Biological Chemistry, 2007, 282(37):26656-64.
2. Aoki K, Saito H, Itzstein C, Ishiguro M, Shibata T, Blanque R, et al. A TNF receptor loop peptide mimic blocks RANK ligand-induced signaling, bone resorption, and bone loss. J Clin Invest. 2006 Jun;116(6):1525-34. Epub 2006 May 4. PubMed PMID: 16680194.
3. Frick KK, LaPlante K, Bushinsky DA. RANK ligand and TNF-alpha mediate acid-induced bone calcium efflux in vitro. Am J Physiol Renal Physiol. 2005 Nov;289(5):F1005-11. Epub 2005 Jun 21. PubMed PMID: 15972386.
4. Sato N, Takahashi N, Suda K, Nakamura M, Yamaki M, Ninomiya T, et al. MyD88 but not TRIF is essential for osteoclastogenesis induced by lipopolysaccharide, diacyl lipopeptide, and IL-1alpha. J Exp Med. 2004 Sep 6;200(5):601-11. PubMed PMID: 15353553.
5. Cheng X, Kinosaki M, Takami M, Choi Y, Zhang H, Murali R. Disabling of receptor activator of nuclear factor-kappaB (RANK) receptor complex by novel osteoprotegerin-like peptidomimetics restores bone loss in vivo. J Biol Chem. 2004 Feb 27;279(9):8269-77. Epub 2003 Dec 15. PubMed PMID: 14679212.
6. Leslie DS, Vincent MS, Spada FM, Das H, Sugita M, Morita CT, et al. CD1-mediated gamma/delta T cell maturation of dendritic cells. J Exp Med. 2002 Dec 16;196(12):1575-84. PubMed PMID: 12486100.