

## Product datasheet

# Recombinant human Osteoprotegerin protein ab73829

### Overview

<b>Product name</b>	Recombinant human Osteoprotegerin protein
<b>Protein length</b>	Protein fragment

### Description

<b>Nature</b>	Recombinant
<b>Source</b>	Pichia pastoris

### Amino Acid Sequence

<b>Species</b>	Human
<b>Sequence</b>	ETFPPKYLHY DEETSHQLLC DKCPPGYLK QHCTAKWKTV CAPCPDHYT DSWHTSDECL YCSPVCKELQ YVKQECNRTH NRVCECKEGR YLEIEFCLKH RSCPPGFGVV QAGTPERNV CKRCPDGFFS NETSSKAPCR KHTNCSVFGL LLTQKGNATH DNICSGNSES TQKCGIDVTL

<b>Molecular weight</b>	110 kDa
<b>Amino acids</b>	22 to 201
<b>Additional sequence information</b>	Recombinant OPG produced in yeast contains 2x412 amino acid residues, including 180 residues from mature OPG (a.a 22-201) and 232 residues from the Fc protein of human IgG1/

### Specifications

Our [Abpromise guarantee](#) covers the use of **ab73829** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Biological activity</b>	Biological Activity: Determined by its ability to neutralize the stimulation of U937 cells treated with 10ng/ml of soluble RANKL (sRANKL).
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<b>Applications</b>	SDS-PAGE
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<b>Purity</b>	> 90 % SDS-PAGE. Purified by proprietary chromatographic techniques. Purity: Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
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<b>Form</b>	Lyophilised
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<b>Additional notes</b>	For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).
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## Preparation and Storage

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<b>Stability and Storage</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.  Preservative: None Constituents: PBS, pH 7.4  This product is an active protein and may elicit a biological response in vivo, handle with caution.
<b>Reconstitution</b>	Lyophilized from a 0.2µm filtered concentrated (0.5mg/ml) solution in PBS, pH= 7.4. Reconstitute the lyophilized Osteoprotegerin in sterile 18MOhm-cm H <sub>2</sub> O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

## General Info

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<b>Function</b>	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.
<b>Tissue specificity</b>	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.
<b>Involvement in disease</b>	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.
<b>Sequence similarities</b>	Contains 2 death domains. Contains 4 TNFR-Cys repeats.
<b>Post-translational modifications</b>	N-glycosylated. Contains sialic acid residues. The N-terminus is blocked.
<b>Cellular localization</b>	Secreted.

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

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