

OPG (TR1BK1): sc-53976

BACKGROUND

Bone morphogenesis and remodeling involve the formation of bone from osteoblasts and the resorption of bone by osteoclasts. The cytokine osteoprotegerin (OPG), also designated osteoclastogenesis inhibitory factor (OCIF), is known to inhibit osteoclast formation. A secreted glycoprotein, OPG is a member of the TNF receptor family that increases bone density and volume. OPG is thought to inhibit osteoclastogenesis by disrupting the cell-to-cell signaling between osteoblastic stromal cells and osteoclast progenitors. OPG is known to bind to TRAIL, a death domain-containing protein, and to inhibit TRAIL apoptosis in Jurkat cells. OPG also binds to osteoclast differentiation factor (ODF), also known as TRANCE/RANKL, a membrane-bound protein belonging to the TNF ligand family. Both TNF α and TNF β upregulate OPG expression, while the bone resorbing agent prostaglandin E2 down-regulates OPG.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TNFRSF11B (human) mapping to 8q24.

SOURCE

OPG (TR1BK1) is a mouse monoclonal antibody raised against recombinant full length OPG of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

OPG (TR1BK1) is recommended for detection of OPG of human origin by immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for OPG siRNA (h): sc-40152, OPG shRNA Plasmid (h): sc-40152-SH and OPG shRNA (h) Lentiviral Particles: sc-40152-V.

Molecular Weight of OPG monomer: 60 kDa.

Molecular Weight of OPG homodimer: 120 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **OPG (E-10): sc-390518** for OPG antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.