

DC-STAMP (H-91): sc-98770

BACKGROUND

Bone homeostasis is accomplished by the balance of osteoblast and osteoclast activity. DC-STAMP (DC-specific transmembrane protein), also known as Transmembrane 7 superfamily member 4, is a 470 amino acid multi-pass membrane protein that regulates osteoclast and macrophage cell fusion. With localization at the cell surface, DC-STAMP is highly expressed in dendritic cells of the lung, kidney, liver and lymph nodes and is expressed at lower levels in spleen, bone marrow, leukocytes and pancreas. Mice that lack the gene encoding DC-STAMP exhibit upregulation of bone formation by osteoblasts and decreased bone reabsorption, ultimately leading to an increase in bone mass. Alternatively, mice that overexpress the DC-STAMP gene show decreased osteoblast activity and bone mass, due to accelerated cell-cell fusion of osteoclasts. This evidence suggests that DC-STAMP plays an essential role in osteoclastogenesis.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TM7SF4 (human) mapping to 8q22.3; Tm7sf4 (mouse) mapping to 15 B3.1.

SOURCE

DC-STAMP (H-91) is a rabbit polyclonal antibody raised against amino acids 120-210 mapping within an internal region of DC-STAMP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

DC-STAMP (H-91) is recommended for detection of DC-STAMP of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DC-STAMP (H-91) is also recommended for detection of DC-STAMP in additional species, including canine.

Suitable for use as control antibody for DC-STAMP siRNA (h): sc-77688, DC-STAMP siRNA (m): sc-142887, DC-STAMP shRNA Plasmid (h): sc-77688-SH, DC-STAMP shRNA Plasmid (m): sc-142887-SH, DC-STAMP shRNA (h) Lentiviral Particles: sc-77688-V and DC-STAMP shRNA (m) Lentiviral Particles: sc-142887-V.

Molecular Weight of DC-STAMP: 53 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.