

Grancalcin (N-20): sc-14224

BACKGROUND

Grancalcin is a calcium-binding protein that is especially abundant in human neutrophils. Grancalcin belongs to the penta EF-hand (PEF) subfamily of EF-hand proteins, which also comprises calpain, sorcin, peflin and ALG-2. Grancalcin forms a homodimer through the association of the unpaired EF5 hands. Grancalcin undergoes important conformational changes upon binding of calcium, which subsequently exposes hydrophobic amino acid residues to direct the protein to hydrophobic surfaces. Grancalcin interacts with L-Plastin, a protein known to have actin bundling activity, which suggests that Grancalcin may play a role in the regulation of neutrophil adhesion. Grancalcin is specifically associated with cells originating in the bone marrow, and it is particularly abundant in neutrophils and monocytes, with relatively small amounts detected in lymphocytes.

CHROMOSOMAL LOCATION

Genetic locus: GCA (human) mapping to 2q24.2.

SOURCE

Grancalcin (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Grancalcin 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.

Blocking peptide available for competition studies, sc-14224 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Grancalcin (N-20) is recommended for detection of Grancalcin of human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Grancalcin siRNA (h): sc-43349, Grancalcin shRNA Plasmid (h): sc-43349-SH and Grancalcin shRNA (h) Lentiviral Particles: sc-43349-V.

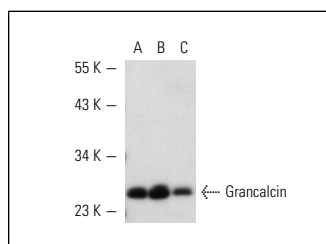
Molecular Weight of Grancalcin: 28 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, THP-1 cell lysate: sc-2238 or AML-193 whole cell lysate: sc-364182.

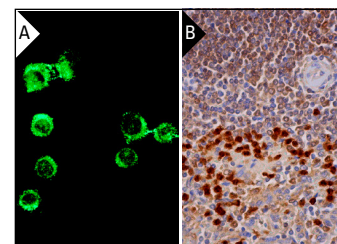
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Grancalcin (N-20): sc-14224. Western blot analysis of Grancalcin in HL-60 (A), AML-193 (B), and THP-1 (C) whole cell lysates.



Grancalcin (N-20): sc-14224. Immunofluorescence staining of methanol-fixed HL-60 cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic and nuclear staining of cells in white pulp and cells in red pulp (B).

SELECT PRODUCT CITATIONS

- Daly, C., Wong, V., Burova, E., Wei, Y., Zabski, S., Griffiths, J., Lai, K.M., Lin, H.C., Ioffe, E., Yancopoulos, G.D. and Rudge, J.S. 2004. Angiopoietin-1 modulates endothelial cell function and gene expression via the transcription factor FKHR (FOXO1). *Genes Dev.* 18: 1060-1071.

PROTOCOLS

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

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Try **Grancalcin (C-10): sc-393984** or **Grancalcin (D-12): sc-393792**, our highly recommended monoclonal alternatives to Grancalcin (N-20).