

# Grancalcin (H-11): sc-393681

## 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.

## REFERENCES

1. Teahan, C.G., et al. 1992. Isolation and characterization of Grancalcin, a novel 28 kDa EF-hand calcium-binding protein from human neutrophils. *Biochem. J.* 286: 549-554.
2. Boyhan, A., et al. 1992. Molecular cloning and characterization of Grancalcin, a novel EF-hand calcium-binding protein abundant in neutrophils and monocytes. *J. Biol. Chem.* 267: 2928-2933.
3. Lollike, K., et al. 1995. An ELISA for Grancalcin, a novel cytosolic calcium-binding protein present in leukocytes. *J. Immunol. Methods* 185: 1-8.
4. Jia, J., et al. 2000. Crystal structure of human Grancalcin, a member of the penta-EF-hand protein family. *J. Mol. Biol.* 300: 1271-1281.
5. Lollike, K., et al. 2001. Biochemical characterization of the penta-EF-hand protein Grancalcin, and identification of L-plastin as a binding partner. *J. Biol. Chem.* 276: 17762-17769.

## CHROMOSOMAL LOCATION

Genetic locus: Gca (mouse) mapping to 2 C1.3.

## SOURCE

Grancalcin (H-11) is a mouse monoclonal antibody raised against amino acids 1-65 mapping at the N-terminus of Grancalcin of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Grancalcin (H-11) is available conjugated to agarose (sc-393681 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393681 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393681 PE), fluorescein (sc-393681 FITC), Alexa Fluor® 488 (sc-393681 AF488), Alexa Fluor® 546 (sc-393681 AF546), Alexa Fluor® 594 (sc-393681 AF594) or Alexa Fluor® 647 (sc-393681 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393681 AF680) or Alexa Fluor® 790 (sc-393681 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Grancalcin (H-11) is recommended for detection of Grancalcin of mouse origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Grancalcin siRNA (m): sc-145755, Grancalcin shRNA Plasmid (m): sc-145755-SH and Grancalcin shRNA (m) Lentiviral Particles: sc-145755-V.

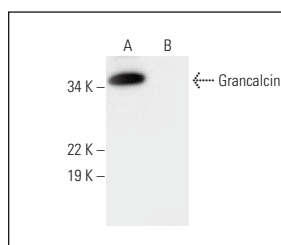
Molecular Weight of Grancalcin: 28 kDa.

Positive Controls: LADMAC whole cell lysate: sc-364189 or RAW 264.7 whole cell lysate: sc-2211.

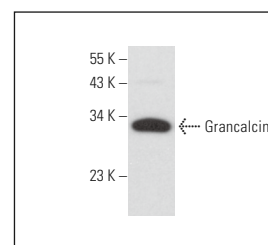
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Grancalcin (H-11): sc-393681. Western blot analysis of Grancalcin expression in LADMAC (A) and AML-193 (B) whole cell lysates. Note lack of reactivity with human Grancalcin in lane B.



Grancalcin (H-11): sc-393681. Western blot analysis of Grancalcin expression in RAW 264.7 whole cell lysate.

## 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](http://www.scbt.com) for detailed protocols and support products.