

# Calgranulin A/B (5.5): sc-53186

## BACKGROUND

The family of EF-hand type  $\text{Ca}^{2+}$ -binding proteins includes Calbindin (previously designated vitamin D-dependent  $\text{Ca}^{2+}$ -binding protein), S-100  $\alpha$  and  $\beta$ , Calgranulins A (also designated MRP8), B (also designated MRP14) and C (S-100 like proteins) and the parvalbumin family members, including parvalbumin  $\alpha$  and parvalbumin  $\beta$  (also designated oncomodulin). Calbindin, S-100 proteins and parvalbumin proteins are each expressed in neural tissues. In addition, S-100  $\alpha$  and  $\beta$  are present in a variety of other tissues, and Calbindin is present in intestine and kidney. Parvalbumin  $\alpha$  is also found in fast-contracting/relaxing skeletal muscle fibers and parvalbumin  $\beta$  is found in many tumor tissues as well as in the organ of Corti. Calbindin, S-100 proteins and parvalbumins have all been detected in leydig cells and the testis. These proteins are thought to play a role in hormone production and spermatogenesis. Calgranulin is expressed in macrophages and epithelial cells.

## REFERENCES

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4. Hogg, N., et al. 1989. Monoclonal antibody 5.5 reacts with p8,14, a myeloid molecule associated with some vascular endothelium. *Eur. J. Immunol.* 19: 1053-1061.
5. Zimmer, D., et al. 1991. Isolation of a rat S-100  $\alpha$  cDNA and distribution of its mRNA in rat tissues. *Brain Res. Bull.* 27: 157-162.
6. Rickmann, M. and Wolff, J.R. 1995. S-100 protein expression in subpopulations of neurons of rat brain. *Neuroscience* 67: 977-991.
7. Wang, Y. and Christakos, S. 1995. Retinoic acid regulates the expression of the calcium binding protein, Calbindin D28K. *Mol. Endocrinol.* 9: 1510-1521.
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9. Hessian, P.A., et al. 2001. The heterodimeric complex of MRP-8 (S100A8) and MRP-14 (S100A9). Antibody recognition, epitope definition and the implications for structure. *Eur. J. Biochem.* 268: 353-363.

## CHROMOSOMAL LOCATION

Genetic locus: S100A8/S100A9 (human) mapping to 1q21.3.

## SOURCE

Calgranulin A/B (5.5) is a mouse monoclonal antibody raised against acute monocytic leukaemia cells of human origin.

## PRODUCT

Each vial contains 200  $\mu\text{g}$  IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Calgranulin A/B (5.5) is recommended for detection of Calgranulin A/B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu\text{g}$  per 100-500  $\mu\text{g}$  of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

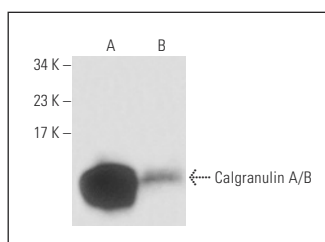
Molecular Weight of Calgranulin A/B: 11/14 kDa.

Positive Controls: mouse spleen extract: sc-2391, HL-60 + DMSO cell lysate: sc-24703 or HL-60 whole cell lysate: sc-2209.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



Calgranulin A/B (5.5): sc-53186. Western blot analysis of Calgranulin A/B expression in human peripheral blood (A) and HL-60 (B) whole cell lysates.

## 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.



See **Calgranulin A (C-10): sc-48352** for Calgranulin A antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.