



# Calgranulin B (CF557): sc-53034

## 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 testis. These proteins are thought to play a role in hormone production and spermatogenesis. Calgranulin is expressed in macrophages and epithelial cells.

## REFERENCES

1. Pfyffer, G.E., et al. 1987. Developmental and functional studies of parvalbumin and calbindin D28K in hypothalamic neurons grown in serum-free medium. *J. Neurochem.* 49: 442-451.
2. Heizmann, C.W. 1988. Calcium-binding proteins of the EF-type. *J. Cardiovasc. Pharmacol.* 5: S30-S37.
3. Kagi, U., et al. 1988. Developmental appearance of the  $\text{Ca}^{2+}$ -binding proteins parvalbumin, calbindin D-28K, S-100 proteins and calmodulin during testicular development in the rat. *Cell Tissue Res.* 252: 359-365.
4. Zimmer, D.B., 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.
5. Rickmann, M., et al. 1995. S-100 protein expression in subpopulations of neurons of rat brain. *Neuroscience* 67: 977-991.
6. Wang, Y.Z., et al. 1995. Retinoic acid regulates the expression of the calcium binding protein, calbindin-D28k. *Mol. Endocrinol.* 9: 1510-1521.
7. Muntener, M., et al. 1995. Increase of skeletal muscle relaxation speed by direct injection of parvalbumin cDNA. *Proc. Natl. Acad. Sci. USA* 92: 6504-6508.
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## CHROMOSOMAL LOCATION

Genetic locus: S100A9 (human) mapping to 1q21; S100a9 (mouse) mapping to 3 F1-F2.

## SOURCE

Calgranulin B (CF557) is a mouse monoclonal antibody raised against purified granulocyte antigen of human origin.

## STORAGE

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

## PRODUCT

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

Available as phycoerythrin (sc-53034 PE) or fluorescein (sc-53034 FITC) conjugates for flow cytometry, 100 tests.

## APPLICATIONS

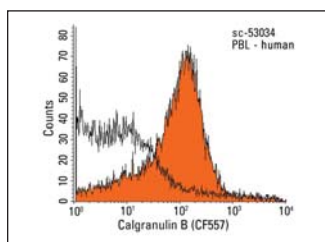
Calgranulin B (CF557) is recommended for detection of Calgranulin B of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu\text{g}$  per  $1 \times 10^6$  cells); may cross-react with Calgranulin A.

Molecular Weight of Calgranulin B: 14 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Calgranulin B (CF557): sc-53034. Indirect FCM analysis of human peripheral blood leukocytes stained with Calgranulin B (CF557), followed by PE-conjugated goat anti-mouse IgG<sub>1</sub>: sc-3764. Black line histogram represents the isotype control, normal mouse IgG<sub>1</sub>: sc-3877.

## 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) or our catalog for detailed protocols and support products.