SANTA CRUZ BIOTECHNOLOGY, INC.

# Calgranulin B (H-90): sc-20173

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The family of EF-hand type $Ca^{2+}$-binding proteins includes calbindin (previously designated vitamin D-dependent $Ca^{2+}$-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 parvalbulmins 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


1. van Heyningen, V., et al. 1985. Tissue localization and chromosomal assignment of a serum protein that tracks the cystic fibrosis gene. Nature 315: 513-515.
2. Hayward, C., et al. 1986. Monoclonal antibodies to cystic fibrosis antigen. J. Immunol. Methods 91: 117-122.


## CHROMOSOMAL LOCATION

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

## SOURCE

Calgranulin B (H-90) is a rabbit polyclonal antibody raised against amino acids 25-114 mapping at the C-terminus of Calgranulin B 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

Calgranulin B (H-90) is recommended for detection of Calgranulin B 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 Calgranulin B siRNA (h): sc-43344, Calgranulin B shRNA Plasmid (h): sc-43344-SH and Calgranulin B shRNA (h) Lentiviral Particles: sc-43344-V.

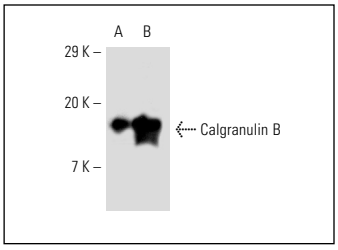
Molecular Weight of Calgranulin B: 14 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or HL-60 + DMSO cell lysate: sc-24703.

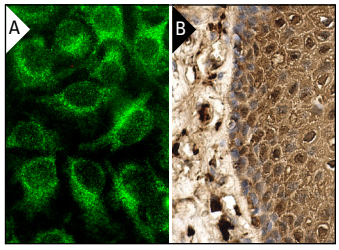
## STORAGE

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

## DATA




Calgranulin B (H-90): sc-20173. Western blot analysis of Calgranulin B expression in untreated (**A**) and DMSO treated HL-60 (**B**) whole cell lysates.




Calgranulin B (H-90): sc-20173. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic and nuclear staining of squamous epithelial cells (**B**).

## SELECT PRODUCT CIATIONS


1. Nofech-Mozes, S., et al. 2008. Biological markers predictive of invasive recurrence in DCIS. Clin. Med. Oncol. 2: 7-18.
2. Nukui, T., et al. 2008. S100A8/A9, a key mediator for positive feedback growth stimulation of normal human keratinocytes. J. Cell. Biochem. 104: 453-464.
3. Caldwell, R.L., et al. 2008. Tissue profiling MALDI mass spectrometry reveals prominent calcium-binding proteins in the proteome of regenerative MRL mouse wounds. Wound Repair Regen. 16: 442-449.
4. Sorenson, B.S., et al. 2012. IL-1 receptor regulates S100A8/A9-dependent keratinocyte resistance to bacterial invasion. Mucosal Immunol. 5: 66-75.
5. Bando, M., et al. 2013. Mechanism of interleukin-1$\alpha$ transcriptional regulation of S100A9 in a human epidermal keratinocyte cell line. Biochim. Biophys. Acta 1829: 954-962.
6. Khammanivong, A., et al. 2013. S100A8/A9 (calprotectin) negatively regulates $G_2$/M cell cycle progression and growth of squamous cell carcinoma. PLoS ONE 8: e69395.
7. Zou, X., et al. 2013. Augmentation of epithelial resistance to invading bacteria by using mRNA transfections. Infect. Immun. 81: 3975-3983.


## RESEARCH USE

For research use only, not for use in diagnostic procedures.