**BACKGROUND**

The family of EF-hand type Ca$^{2+}$-binding proteins includes Calbindin (previously designated vitamin D-dependent Ca$^{2+}$-binding protein), S-100α and β, Calgranulin A (also designated MRPI8), Calgranulin B (also designated MRPI14) and Calgranulin C (S-100 like protein), and the parvalbumin family members, including parvalbumin α and parvalbumin β (also designated oncomodulin). Calbindin, S-100 proteins and parvalbumins are each expressed in neural tissues. In addition, S-100α and β are present in a variety of other tissues, and Calbindin is present in intestine and kidney. Parvalbumin α is also found in fast-contracting/relaxing skeletal muscle fibers and parvalbumin β 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.

**APPLICATIONS**

Calgranulin B (B-5) is recommended for detection of Calgranulin B of human 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 1:30-1:300).

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: human tonsil tissue extract: sc-364263, human spleen extract: sc-363779 or HL-60 + DMSO cell lysate: sc-24703.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λBP-HRP: sc-516132 or m-IgG λBP-HRP (Cruz Marker); sc-516132-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 λBP-FITC: sc-516185 or m-IgG λBP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG λBP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

Calgranulin B (B-5) HRP: sc-376772. Direct western blot analysis of Calgranulin B expression in HL-60 + DMSO whole cell lysate (A) and human spleen (B) and human tonsil (C) tissue extracts.

Calgranulin B (B-5): sc-376772. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic and membrane staining of hematopoietic cells (A), Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic, membrane and nuclear staining of squamous epithelial cells (B).

**REFERENCES**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

Calgranulin B (B-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 63-99 near the C-terminus of Calgranulin B of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1, lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calgranulin B (B-5) is available conjugated to agarose (sc-376772 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376772 HRP), 200 µg/ml, for WB, HRP and ELISA; to either phycoerythrin (sc-376772 PE), fluorescein (sc-376772 FITC), Alexa Fluor® 488 (sc-376772 AF488), Alexa Fluor® 546 (sc-376772 AF546), Alexa Fluor® 594 (sc-376772 AF594) or Alexa Fluor® 647 (sc-376772 AF647), 200 µg/ml, for WB (RGB), IF, HRP and FCM; and to either Alexa Fluor® 680 (sc-376772 AF680) or Alexa Fluor® 790 (sc-376772 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376772 P; (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**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.