

# Dematin (G-14): sc-26059

## BACKGROUND

Caldesmon, Filamin 1, Nebulin, Villin, Plastin, ADF, Gelsolin, Dematin, and Cofilin are differentially expressed Actin binding proteins. Dematin is a bundling protein of the erythrocyte membrane skeleton. Dematin is localized to the spectrin-Actin junctions, and its Actin-bundling activity is abolished upon phosphorylation by cAMP-dependent protein kinase. It may also play a role in the regulation of cell shape, implying a role in tumorigenesis. Dematin is a trimeric protein containing two identical subunits and a larger subunit. It is localized to the heart, brain, lung, skeletal muscle and kidney. The Dematin gene is located on human chromosome 8p21.3, a region frequently deleted in prostate cancer, and mouse chromosome 14 D2.

## REFERENCES

1. Rana, A.P., et al. 1993. Cloning of human erythroid Dematin reveals another member of the villin family. *Proc. Natl. Acad. Sci. USA* 90: 6651-6655.
2. Manno, S., et al. 1995. Modulation of erythrocyte membrane mechanical function by  $\beta$ -spectrin phosphorylation and dephosphorylation. *J. Biol. Chem.* 270: 5659-5665.
3. Azim, A.C., et al. 1995. Isoform cloning, actin binding, and chromosomal localization of human erythroid Dematin, a member of the villin superfamily. *J. Biol. Chem.* 270: 17407-17413.
4. Peters, L.L., et al. 1995. The gene encoding the erythrocyte membrane skeleton protein Dematin (Epb4.9) maps to mouse chromosome 14. *Genomics* 26: 634-635.
5. Azim, A.C., et al. 1996. Human erythrocyte Dematin and protein 4.2 (pallidin) are ATP binding proteins. *Biochemistry* 35: 3001-3006.
6. Kim, A.C., et al. 1998. Alternative splicing and structure of the human erythroid Dematin gene. *Biochim. Biophys. Acta* 1398: 382-386.
7. Lutchman, M., et al. 1999. Loss of heterozygosity on 8p in prostate cancer implicates a role for Dematin in tumor progression. *Cancer Genet. Cytogenet.* 115: 65-69.

## CHROMOSOMAL LOCATION

Genetic locus: EPB49 (human) mapping to 8p21.3; Epb4.9 (mouse) mapping to 14 D2.

## SOURCE

Dematin (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Dematin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26059 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

Dematin (G-14) is recommended for detection of Dematin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Dematin (G-14) is also recommended for detection of Dematin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Dematin siRNA (h): sc-105286, Dematin siRNA (m): sc-142992, Dematin shRNA Plasmid (h): sc-105286-SH, Dematin shRNA Plasmid (m): sc-142992-SH, Dematin shRNA (h) Lentiviral Particles: sc-105286-V and Dematin shRNA (m) Lentiviral Particles: sc-142992-V.

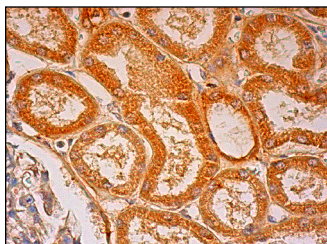
Molecular Weight of Dematin: 52/48 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Dematin (G-14): sc-26059. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.