

COMMD7 (AT49B5): sc-517395

BACKGROUND

COMMD family members are a group of evolutionary conserved proteins that share a common COMM domain at the extreme C-terminus, which provides an interface for protein-protein interactions. Of the ten family members, the role of COMMD1, also known as MURR1, is best characterized, functioning to inhibit TNF-induced NF κ B p50 and to facilitate biliary copper excretion within hepatocytes. Most, if not all, COMMD proteins have been found to play a role in the regulation NF κ B and, despite their similarities, seem to function in unique and non-redundant pathways. COMMD proteins may also play a role in the function of epithelial sodium channels, cell proliferation, copper homeostasis and in the regulation of the ubiquitin pathway. With highest expression in lung, COMMD7 (COMM domain-containing protein 7) is a 200 amino acid protein that binds COMMD1 via its COMM domain. By interacting with the NF κ B complex, COMMD7 suppresses the transcriptional activity of NF κ B.

REFERENCES

1. Burstein, E., et al. 2005. COMMD proteins, a novel family of structural and functional homologs of MURR1. *J. Biol. Chem.* 280: 22222-22232.
2. de Bie, P., et al. 2006. Characterization of COMMD protein-protein interactions in NF κ B signalling. *Biochem. J.* 398: 63-71.
3. Maine, G.N. and Burstein, E. 2007. COMMD proteins and the control of the NF κ B pathway. *Cell Cycle* 6: 672-676.
4. Maine, G.N. and Burstein, E. 2007. COMMD proteins: COMMing to the scene. *Cell. Mol. Life Sci.* 64: 1997-2005.
5. van de Sluis, B., et al. 2007. Increased activity of hypoxia-inducible factor 1 is associated with early embryonic lethality in Commd1 null mice. *Mol. Cell. Biol.* 27: 4142-4156.
6. Maine, G.N., et al. 2008. COMMD1 expression is controlled by critical residues that determine XIAP binding. *Biochem. J.* 417: 601-609.
7. Burkhead, J.L., et al. 2008. COMMD1 forms oligomeric complexes targeted to the endocytic membranes via specific interactions with PtdIns(4,5)p2. *J. Biol. Chem.* 284: 696-707.

CHROMOSOMAL LOCATION

Genetic locus: COMMD7 (human) mapping to 20q11.21; Commd7 (mouse) mapping to 2 H1.

SOURCE

COMMD7 (AT49B5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-200 of COMMD7 of human origin.

PRODUCT

Each vial contains 100 μ g IgG γ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide, 1% glycerol and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

COMMD7 (AT49B5) is recommended for detection of COMMD7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for COMMD7 siRNA (h): sc-72967, COMMD7 siRNA (m): sc-142488, COMMD7 shRNA Plasmid (h): sc-72967-SH, COMMD7 shRNA Plasmid (m): sc-142488-SH, COMMD7 shRNA (h) Lentiviral Particles: sc-72967-V and COMMD7 shRNA (m) Lentiviral Particles: sc-142488-V.

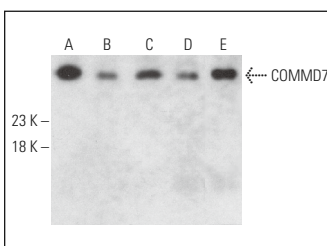
Molecular Weight of COMMD7: 23 kDa.

Positive Controls: A549 cell lysate: sc-2413, NCI-H1299 whole cell lysate: sc-364234 or human heart extract: sc-363763.

RECOMMENDED SUPPORT REAGENTS

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



COMMD7 (AT49B5): sc-517395. Western blot analysis of COMMD7 expression in A549 (A), NCI-H1299 (B) and AMJZ-C8 (C) whole cell lysates and human heart (D) and rat lung (E) tissue extracts.

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 for detailed protocols and support products.