

COMMD1 (B-3): sc-518177

BACKGROUND

Copper is an essential micronutrient used as a co-factor for several essential enzymes in all living organisms. Due to the high toxicity of copper, its metabolism is tightly regulated and defects in this regulation can cause Menkes (deficiency) or Wilson (accumulation) disease in various tissue. COMMD1 (copper metabolism MURR1 domain-containing protein 1), also known as MURR1, is a 190 amino acid protein responsible for inhibition of TNF-induced NFκB p50 and has a suggested role in facilitation of biliary copper excretion within hepatocytes. COMMD1 localizes to both the nucleus and cytoplasm within the cell. Highest expression is found in liver tissue, with lower expressions in lung, heart, kidney and brain tissue. COMMD1 interacts directly with COMMD6 and ATP7B, and indirectly with IκB-β and COMMD7. All ten members of the COMMD family (COMMD1-10) contain a conserved COMM domain which provides an interface for protein-protein interactions.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607238. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Klomp, A.E., et al. 2003. The ubiquitously expressed MURR1 protein is absent in canine copper toxicosis. *J. Hepatol.* 39: 703-709.
3. Coronado, V.A., et al. 2005. COMMD1 (MURR1) as a candidate in patients with copper storage disease of undefined etiology. *Clin. Genet.* 68: 548-551.
4. Burstein, E., et al. 2005. COMMD proteins, a novel family of structural and functional homologs of MURR1. *J. Biol. Chem.* 280: 22222-22232.
5. de Bie, P., et al. 2005. The many faces of the copper metabolism protein MURR1/COMMD1. *J. Hered.* 96: 803-811.

CHROMOSOMAL LOCATION

Genetic locus: COMMD1 (human) mapping to 2p15.

SOURCE

COMMD1 (B-3) is a mouse monoclonal antibody raised against amino acids 41-180 mapping near the C-terminus of COMMD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-518177 X, 200 µg/0.1 ml.

COMMD1 (B-3) is available conjugated to agarose (sc-518177 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518177 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518177 PE), fluorescein (sc-518177 FITC), Alexa Fluor® 488 (sc-518177 AF488), Alexa Fluor® 546 (sc-518177 AF546), Alexa Fluor® 594 (sc-518177 AF594) or Alexa Fluor® 647 (sc-518177 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518177 AF680) or Alexa Fluor® 790 (sc-518177 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

COMMD1 (B-3) is recommended for detection of COMMD1 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 1:30-1:3000).

Suitable for use as control antibody for COMMD1 siRNA (h): sc-94689, COMMD1 shRNA Plasmid (h): sc-94689-SH and COMMD1 shRNA (h) Lentiviral Particles: sc-94689-V.

COMMD1 (B-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

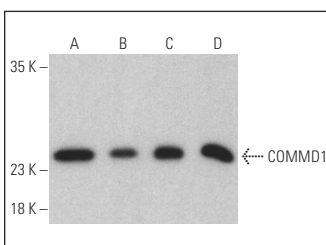
Molecular Weight of COMMD1: 21 kDa.

Positive Controls: HEK293T whole cell lysate: sc-45137, Hep G2 cell lysate: sc-2227 or SK-BR-3 cell lysate: sc-2218.

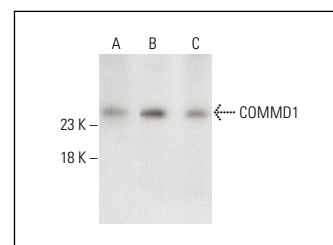
RECOMMENDED SUPPORT REAGENTS

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



COMMD1 (B-3): sc-518177. Western blot analysis of COMMD1 expression in HEK293T (A), Hep G2 (B), SK-BR-3 (C) and MOLT-4 (D) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



COMMD1 (B-3): sc-518177. Western blot analysis of COMMD1 expression in HEK293T (A), HeLa (B) and Hep G2 (C) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.

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.