

COMMD1 (K-13): sc-107498

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 NF κ B 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 I κ B- 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

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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.
6. de Bie, P., et al. 2007. Distinct Wilson's disease mutations in ATP7B are associated with enhanced binding to COMMD1 and reduced stability of ATP7B. *Gastroenterology* 133: 1316-1326.
7. Narindrasorasak, S., et al. 2007. Characterization and copper binding properties of human COMMD1 (MURR1). *Biochemistry* 46: 3116-3128.

CHROMOSOMAL LOCATION

Genetic locus: Commd1 (mouse) mapping to 11 A3.2.

SOURCE

COMMD1 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COMMD1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-107498 P, (100 μ 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

COMMD1 (K-13) is recommended for detection of COMMD1 of mouse and rat 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); non cross-reactive with family member COMMD10.

Suitable for use as control antibody for COMMD1 siRNA (m): sc-142482, COMMD1 shRNA Plasmid (m): sc-142482-SH and COMMD1 shRNA (m) Lentiviral Particles: sc-142482-V.

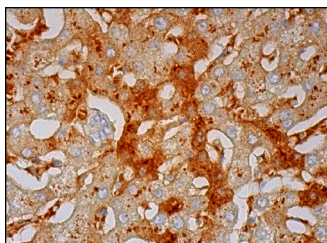
Molecular Weight of COMMD1: 21 kDa.

Positive Controls: mouse liver extract: sc-2256.

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



COMMD1 (K-13): sc-107498. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

STORAGE

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

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Try **COMMD1 (B-4): sc-166248**, our highly recommended monoclonal alternative to COMMD1 (K-13).