

COMMD1 (B-4): sc-166248

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 COMMD domain which provides an interface for protein-protein interactions.

CHROMOSOMAL LOCATION

Genetic locus: COMMD1 (human) mapping to 2p15; Commd1 (mouse) mapping to 11 A3.2.

SOURCE

COMMD1 (B-4) 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 μ g IgG₃ 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-166248 X, 200 μ g/0.1 ml.

STORAGE

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

APPLICATIONS

COMMD1 (B-4) is recommended for detection of COMMD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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 siRNA (m): sc-142482, COMMD1 shRNA Plasmid (h): sc-94689-SH, COMMD1 shRNA Plasmid (m): sc-142482-SH, COMMD1 shRNA (h) Lentiviral Particles: sc-94689-V and COMMD1 shRNA (m) Lentiviral Particles: sc-142482-V.

COMMD1 (B-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

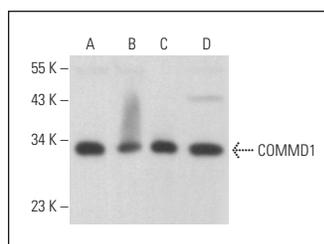
Molecular Weight of COMMD1: 21 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or A549 cell lysate: sc-2413.

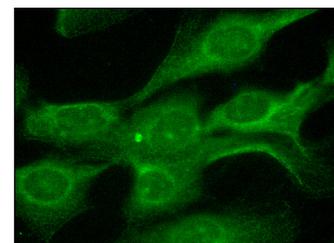
RECOMMENDED SUPPORT REAGENTS

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



COMMD1 (B-4): sc-166248. Western blot analysis of COMMD1 expression in C6 (A), NIH/3T3 (B), HeLa (C) and A549 (D) whole cell lysates.



COMMD1 (B-4): sc-166248. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

- Murata, K., et al. 2017. Hypoxia-sensitive COMMD1 integrates signaling and cellular metabolism in human macrophages and suppresses osteoclastogenesis. *Immunity* 47: 66-79.
- Li, K., et al. 2018. The loss of copper is associated with the increase in copper metabolism MURR domain 1 in ischemic hearts of mice. *Exp. Biol. Med.* 243: 780-785.
- Jiang, Z., et al. 2019. Identification of COMMD1 as a novel Lamin A binding partner. *Mol. Med. Rep.* 20: 1790-1796.
- Jiang, Z., et al. 2019. COMMD1 regulates cell proliferation and cell cycle progression by modulating p21 Cip1 levels. *Biosci. Biotechnol. Biochem.* 83: 845-850.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.