

cyclin M4 (M-57): sc-68437

BACKGROUND

Cyclin M4 (also designated metal transporter CNNM4, ancient conserved domain-containing protein 4) is a 775 amino acid protein encoded by the human gene CNNM4. Cyclin M4 belongs to the ACDP family and contains one CBS domain. Cyclin M4 is a probable metal transporter. The interaction of cyclin M4 with the metal ion chaperone COX11 also suggests that it may play a role in sensory neuron functions. Cyclin M4 is a multi-pass membrane protein that is widely expressed with high expression found in heart. The name of the protein is derived from the weak sequence similarity it shares with the cyclin family, however, cyclin M4 has no cyclin-like function *in vivo*.

REFERENCES

- Rolfs, A. and Hediger, M.A. 1999. Metal ion transporters in mammals: structure, function and pathological implications. *J. Physiol.* 518: 1-12.
- Nelson, N. 1999. Metal ion transporters and homeostasis. *EMBO J.* 18: 4361-4371.
- Eide, D.J. 2000. Metal ion transport in eukaryotic microorganisms: insights from *Saccharomyces cerevisiae*. *Adv. Microb. Physiol.* 43: 1-38.
- Wang, C.Y., Shi, J.D., Yang, P., Kumar, P.G., Li, Q.Z., Run, Q.G., Su, Y.C., Scott, H.S., Kao, K.J. and She, J.X. 2003. Molecular cloning and characterization of a novel gene family of four ancient conserved domain proteins (ACDP). *Gene* 306: 37-44.
- Lakatos, B., Szentmihályi, K., Vinkler, P., Balla, J. and Balla, G. 2004. The role of essential metal ions in the human organism and their oral supplementation to the human body in deficiency states. *Orv. Hetil.* 145: 1315-1319.
- Guo, D., Ling, J., Wang, M.H., She, J.X., Gu, J. and Wang, C.Y. 2005. Physical interaction and functional coupling between ACDP4 and the intracellular ion chaperone COX11, an implication of the role of ACDP4 in essential metal ion transport and homeostasis. *Mol. Pain* 1: 15.

CHROMOSOMAL LOCATION

Genetic locus: CNNM4 (human) mapping to 2q11.2; Cnnm4 (mouse) mapping to 1 B.

SOURCE

cyclin M4 (M-57) is a rabbit polyclonal antibody raised against amino acids 638-694 mapping near the C-terminus of cyclin M4 of mouse origin.

PRODUCT

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

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.

APPLICATIONS

cyclin M4 (M-57) is recommended for detection of cyclin M4 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, 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 cyclin M4 siRNA (h): sc-77065, cyclin M4 siRNA (m): sc-77066, cyclin M4 shRNA Plasmid (h): sc-77065-SH, cyclin M4 shRNA Plasmid (m): sc-77066-SH, cyclin M4 shRNA (h) Lentiviral Particles: sc-77065-V and cyclin M4 shRNA (m) Lentiviral Particles: sc-77066-V.

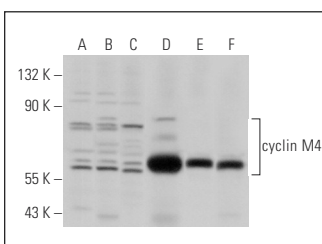
Molecular Weight of cyclin M4: 87 kDa.

Positive Controls: mouse colon extract: sc-364238 or mouse heart extract: sc-2254.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



cyclin M4 (M-57): sc-68437. Western blot analysis of cyclin M4 expression in CCRF-CEM (A), U-698-M (B) and Jurkat (C) whole cell lysates and mouse heart (D), mouse testis (E) and mouse colon (F) tissue extracts.

PROTOCOLS

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