

CENP-M (FF6): sc-81830

BACKGROUND

During mitosis, the transient assembly of the kinetochore occurs on a platform known as the centromere, a specialized chromatin structure that is comprised of various centromere proteins (CENPs). There are two multi-protein centromere complexes, known as CENPA-NAC (nucleosome-associated) and CENPA-CAD (nucleosome distal), which interact with one another to facilitate both the assembly and the activity of the centromere. CENP-M (centromere protein M), also known as CENPM, ICEN39 or PANE1, is a 180 amino acid centromeric protein that localizes to the nucleus in non-confluent cells and to the cytoplasm in dividing or confluent cells. One of several components of the CENPA-NAC complex, CENP-M plays a crucial role in the assembly of the kinetochore and the subsequent chromosome segregation and progression through mitosis. Additionally, CENP-M is thought to be involved in the incorporation of newly synthesized CENP-A into centromeres. Three isoforms of CENP-M exist due to alternative splicing events. Isoform 3 is expressed in B-lineage chronic lymphocytic leukemia (B-CLL) cells, suggesting a possible role in carcinogenesis.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610152. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Renou, J.P., et al. 2003. Identification of genes differentially expressed in mouse mammary epithelium transformed by an activated β -catenin. *Oncogene* 22: 4594-4610.
3. Bierie, B., et al. 2004. The proliferation associated nuclear element (PANE1) is conserved between mammals and fish and preferentially expressed in activated lymphoid cells. *Gene Expr. Patterns* 4: 389-395.
4. Brickner, A.G., et al. 2006. The PANE1 gene encodes a novel human minor histocompatibility antigen that is selectively expressed in B-lymphoid cells and B-CLL. *Blood* 107: 3779-3786.
5. Izuta, H., et al. 2006. Comprehensive analysis of the ICEN (interphase centromere complex) components enriched in the CENP-A chromatin of human cells. *Genes Cells* 11: 673-684.
6. Okada, M., et al. 2006. The CENP-H-I complex is required for the efficient incorporation of newly synthesized CENP-A into centromeres. *Nat. Cell Biol.* 8: 446-457.
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CHROMOSOMAL LOCATION

Genetic locus: CENPM (human) mapping to 22q13.2.

SOURCE

CENP-M (FF6) is a mouse monoclonal antibody raised against recombinant CENP-M of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 50 μ g IgG₁ kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CENP-M (FF6) is recommended for detection of CENP-M of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CENP-M siRNA (h): sc-72859, CENP-M shRNA Plasmid (h): sc-72859-SH and CENP-M shRNA (h) Lentiviral Particles: sc-72859-V.

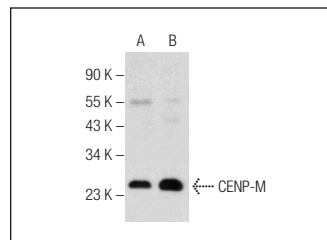
Molecular Weight of CENP-M: 20 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Ramos cell lysate: sc-2216 or MOLT-4 cell lysate: sc-2233.

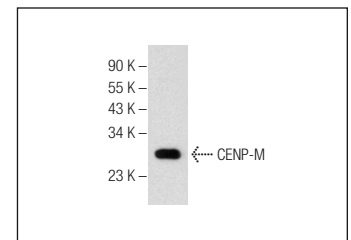
RECOMMENDED SUPPORT REAGENTS

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, 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).

DATA



CENP-M (FF6): sc-81830. Western blot analysis of CENP-M expression in HT-1080 (A) and MOLT-4 (B) whole cell lysates.



CENP-M (FF6): sc-81830. Western blot analysis of CENP-M expression in Ramos whole cell lysate.

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.