## SANTA CRUZ BIOTECHNOLOGY, INC.

# 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 cetromere 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<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610152. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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- 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.
- 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.
- 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.
- 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.
- 7. Foltz, D.R., et al. 2006. The human CENP-A centromeric nucleosomeassociated complex. Nat. Cell Biol. 8: 458-469.

#### **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  $\mu$ g lgG<sub>1</sub> 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  $\mu$ g per 100-500  $\mu$ 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: HT-1080 whole cell lysate: sc-364183, 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-lgGκ BP-HRP: sc-516102 or m-lgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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).

#### 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, \*\*D0 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.