SANTA CRUZ BIOTECHNOLOGY, INC.

CENP-F (H-260): sc-22791

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

A replicated chromosome includes two kinetochores that control chromosome segregation during mitosis. Centromere Protein F, CENP-F (also designated mitosin) is a nuclear matrix kinetochore protein that plays a role in mitotic events. In HeLa cells, CENP-F gradually accumulates in the cell cycle, and like CENP-E is preferentially expressed during mitosis where it mediates the G_2 to M phase checkpoint. Upon completion of mitosis, CENP-F is rapidly degraded. CENP-F consists of two coil domains that flank a central flexible core and contains a P-loop (ADIPTGKT) nucleotide binding site in its globular carboxy-terminus.

REFERENCES

1. Liao, H., et al. 1995. CENP-F is a protein of the nuclear matrix that assembles onto kinetochores at late G_2 and is rapidly degraded after mitosis. J. Cell Biol. 130: 507-518.
2. Zhu, X., et al. 1995. Characterization of a novel 350 kDa nuclear phosphoprotein that is specifically involved in mitotic-phase progression. Mol. Cell. Biol. 15: 5017-5029.
3. Rieder, C.L. and Salmon, E.D. 1998. The vertebrate cell kinetochore and its roles during mitosis. Trends Cell Biol. 8: 310-318.
4. Ashar, H.R., et al. 2000. Farnesyl transferase inhibitors block the farnesylation of CENP-E and CENP-F and alter the association of CENP-E with the microtubules. J. Biol. Chem. 275: 30451-30457.
5. Choo, K.H. 2000. Centromerization. Trends Cell Biol. 10: 182-188.

CHROMOSOMAL LOCATION

Genetic locus: CENPF (human) mapping to 1q41; Cenpf (mouse) mapping to 1 H6.

SOURCE

CENP-F (H-260) is a rabbit polyclonal antibody raised against amino acids 2951-3210 mapping at the C-terminus of CENP-F of human 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.

PROTOCOLS

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

APPLICATIONS

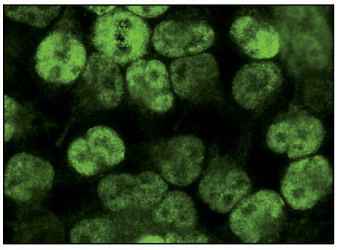
CENP-F (H-260) is recommended for detection of CENP-F of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

Suitable for use as control antibody for CENP-F siRNA (h): sc-37563, CENP-F siRNA (m): sc-37564, CENP-F shRNA Plasmid (h): sc-37563-SH, CENP-F shRNA Plasmid (m): sc-37564-SH, CENP-F shRNA (h) Lentiviral Particles: sc-37563-V and CENP-F shRNA (m) Lentiviral Particles: sc-37564-V.

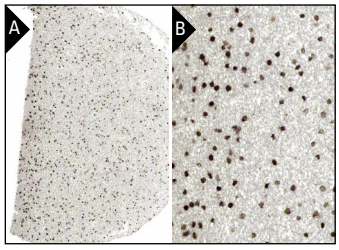
Molecular Weight of CENP-F: 400 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa nuclear extract: sc-2120 or human lateral ventricle tissue.

DATA



CENP-F (H-300): sc-22791. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.



CENP-F (H-260): sc-22791. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lateral ventricle tissue showing nuclear staining of neuronal and non-neuronal cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Stiff, T., et al. 2008. Replication independent ATR signalling leads to G_2/M arrest requiring Nbs1, 53BP1 and MDC1. Hum. Mol. Genet. 17: 3247-3253.
2. Warmerdam, D.O., et al. 2009. Cell cycle-dependent processing of DNA lesions controls localization of Rad9 to sites of genotoxic stress. Cell Cycle 8: 1765-1774.
3. Warmerdam, D.O., et al. 2010. Differential dynamics of ATR-mediated checkpoint regulators. J. Nucleic Acids. E-published.
4. Coleman, K.A., et al. 2011. The BRCA1-RAP80 complex regulates DNA repair mechanism utilization by restricting end resection. J. Biol. Chem. 286: 13669-13680.