## SANTA CRUZ BIOTECHNOLOGY, INC.

# CENP-F (N-18): sc-11292



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<sub>2</sub> 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., Winkfein, R.J., Mack, G., Rattner, J.B. and Yen, T.J. 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.
- Zhu, X., Mancini, M.A., Chang, K.H., Liu, C.Y., Chen, C.F., Shan, B., Jones, D., Yang-Feng, T.L. and Lee, W.H. 1995. Characterization of a novel 350kilodalton nuclear phosphoprotein that is specifically involved in mitoticphase progression. Mol. Cell. Biol. 15: 5017-5029.
- Rieder, C.L. and Salmon, E.D. 1998. The vertebrate cell kinetochore and its roles during mitosis. Trends Cell Biol. 8: 310-318.
- Ashar, H.R., James, L., Gray, K., Carr, D., Black, S., Armstrong, L., Bishop, W.R. and Kirschmeier, P. 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.

## SOURCE

CENP-F (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CENP-F of human origin.

## PRODUCT

Each vial contains 200  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11292 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **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 or our catalog for detailed protocols and support products.

## APPLICATIONS

CENP-F (N-18) is recommended for detection of CENP-F 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)], 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).

CENP-F (N-18) is also recommended for detection of CENP-F in additional species, including equine, bovine and porcine.

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

Molecular Weight of CENP-F: 400 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa nuclear extract: sc-2120 or IMR-32 nuclear extract.

## **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



CENP-F (N-18): sc-11292. Western blot analysis of CENP-F expression in IMR-32 nuclear extract.

## **RESEARCH USE**

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