

Recombinant Human centromere protein F Protein, His tagged

Cat. No. CENPF-011H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CENPF protein (P49454) (Lys 2825-Gln 3114) with a His tag at the C-terminus was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	2825-3114aa
Description	Centromere protein F is a protein that in humans is encoded by the CENPF gene. It is involved in chromosome segregation during cell division. It also has a role in the orientation of microtubules to form cellular cilia. CENPF is part of the nuclear matrix during the G2 phase of the cell cycle (the phase of rapid protein synthesis in preparation for mitosis). In late G2, the protein forms part of the kinetochore, a disc-shaped protein complex that allows the centromere of two sister chromatids to attach to microtubules (forming the spindle apparatus) in order for the microtubules to pull them apart in the process of dividing the cell. It remains part of the kinetochore through early anaphase (the chromosome-dividing phase). In late anaphase, CENPF localises to the spindle midzone, and in telophase (the cell-dividing phase) it localises to the intercellular bridge. It is thought to be subsequently degraded. Mutations in CENPF lead to impaired cell division during early development. Mitosis has been found to take longer when the gene is mutated. Microtubules are protein structures that are part of the cytoskeleton and are necessary for cells to have diverse, complex shapes and migratory ability. They are made by the centrosome, which contains a

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

pair of cylindrical centrioles at right-angles to each other. Before division, CENPF localises at the end of one of the centrioles (the mother centriole) in order to orient microtubules correctly to form thin cellular projections called cilia. Most cilia are primary cilia, which are involved in cell signalling to trigger migration, division or differentiation. Mutations in CENPF disrupt this ability to form cilia; cilia have been found to be fewer in number and shorter when the gene is mutated. CENPF is thought to form either a homodimer or heterodimer.

Tag	C-His
Molecular Mass	33.1 kDa
Endotoxin	Less than 1.0 EU/μg by the LAL method.
Storage	Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.
Storage Buffer	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.
Reconstitution	Reconstitute at 250 μg/mL in sterile water.

GENE INFORMATION

Gene Name	CENPF centromere protein F [Homo sapiens (human)]
Official Symbol	CENPF
Synonyms	CENPF; centromere protein F, 350/400kDa (mitosin); centromere protein F (350/400kD, mitosin); centromere protein F; hcp 1; mitosin; AH antigen; kinetochore

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protein CENPF; CENP-F kinetochore protein; cell-cycle-dependent 350K nuclear protein; centromere protein F, 350/400ka (mitosin); CENF; hcp-1; PRO1779;

Gene ID [1063](#)

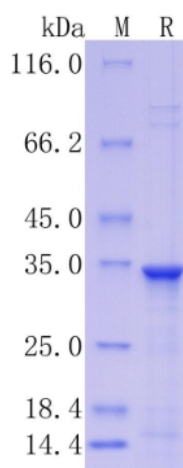
mRNA Refseq [NM_016343](#)

Protein Refseq [NP_057427](#)

MIM [600236](#)

UniProt ID [P49454](#)

Protein on SDS-PAGE under reducing (R) condition.



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