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FANCM Blocking Peptide (C-Term)

Synthetic peptide
Catalog # BP21872b

Specification

FANCM Blocking Peptide (C-Term) - Product Information

Primary Accession Q8IYD8

FANCM Blocking Peptide (C-Term) - Additional Information

Gene ID 57697

Other Names
Fanconi anemia group M protein, Protein FACM, ATP-dependent RNA helicase FANCM, Fanconi anemia-associated polypeptide of 250 kDa, FAAP250, Protein Hef ortholog, FANCM, KIAA1596

Target/Specificity
The synthetic peptide sequence is selected from aa 1772-1783 of HUMAN FANCM

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

FANCM Blocking Peptide (C-Term) - Protein Information

Name FANCM

Synonyms KIAA1596

Function
DNA-dependent ATPase component of the

FANCM Blocking Peptide (C-Term) - Background

ATPase required for FANCD2 ubiquitination, a key reaction in DNA repair. Binds to ssDNA but not to dsDNA. Recruited to forks stalled by DNA interstrand cross-links, and required for cellular resistance to such lesions.

FANCM Blocking Peptide (C-Term) - References

Meetei A.R.,et al.Nat. Genet. 37:958-963(2005).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Heilig R.,et al.Nature 421:601-607(2003).
Nagase T.,et al.DNA Res. 7:273-281(2000).
Mosedale G.,et al.Nat. Struct. Mol. Biol. 12:763-771(2005).

Fanconi anemia (FA) core complex (PubMed:16116422). Required for the normal activation of the FA pathway, leading to monoubiquitination of the FANCI-FANCD2 complex in response to DNA damage, cellular resistance to DNA cross-linking drugs, and prevention of chromosomal breakage (PubMed:16116422, PubMed:19423727, PubMed:20347428, PubMed:20347429, PubMed:29231814). In complex with CENPS and CENPX, binds double-stranded DNA (dsDNA), fork-structured DNA (fsDNA) and Holliday junction substrates (PubMed:20347428, PubMed:20347429). Its ATP-dependent DNA branch migration activity can process branched DNA structures such as a movable replication fork. This activity is strongly stimulated in the presence of CENPS and CENPX (PubMed:20347429). In complex with FAAP24, efficiently binds to single-strand DNA (ssDNA), splayed-arm DNA, and 3'-flap substrates (PubMed:17289582). In vitro, on its own, strongly binds ssDNA oligomers and weakly fsDNA, but does not bind to dsDNA (PubMed:16116434).

Cellular Location
Nucleus

Tissue Location
Expressed in germ cells of fetal and adult

ovaries. In fetal ovaries, it is present in oogonia but expression is stronger in pachytene stage oocytes. Expressed in oocytes arrested at the diplotene stage of prophase I during the last trimester of pregnancy and in adults (PubMed:29231814). Expressed in the testis (PubMed:30075111).

FANCM Blocking Peptide (C-Term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides