10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FANCM Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21872b

Product Information

Application	WB, E
Primary Accession	Q8IYD8
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB54125
Calculated MW	232191

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	This FANCM antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 1752-1783 amino acids from human FANCM.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	FANCM Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FANCM
Synonyms	KIAA1596
Function	DNA-dependent ATPase component of the 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).

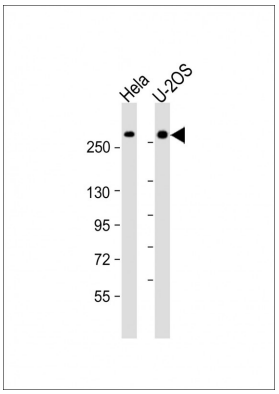
Background

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.

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).

Images



All lanes : Anti-FANCM Antibody (C-Term) at 1:2000 dilution Lane 1: Hela whole cell lysate Lane 2: U-2OS whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 232 kDa Blocking/Dilution buffer: 5% NFDM/TBST.