hFANCI Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	hFANCI, Polyclonal Antibody
Full Product Name	hFANCI Antibody
Product Gene Name	anti-hFANCI antibody
Product Synonym Gene Name	FANCI
Product Synonym Names	FANCI; FANCI gene; FANCI_HUMAN; Fanconi anemia group I protein; Fanconi anemia, complementation group I; FLJ10719; FLJ14658; KIAA1794; Protein FACI; Protein FANCI
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin
Concentration	1mg/ml (lot specific)
Specificity	hFANCI Antibody detects endogenous levels of total hFANCI.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.
Antibody/Peptide Pairs	hFANCI peptide (MBS9617628) is used for blocking the activity of hFANCI antibody (MBS9613548)
Molecular Weight	1328
OMIM	phenotype 611360
3D Structure	ModBase 3D Structure for Q9NVI1
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Immunogen	A synthesized peptide derived from human hFANCI.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Monoubiquitinated by FANCL on Lys-523 during S phase and upon genotoxic stress. Deubiquitinated by USP1 as cells enter G2/M, or once DNA repair is completed. Monoubiquitination requires the FANCA-FANCB-FANCC-FANCE-FANCF-FANCG-FANCM complex. Ubiquitination is required for binding to chromatin, DNA repair, and normal cell cycle progression. Monoubiquitination is stimulated by DNA-binding.Phosphorylated in response to DNA damage by ATM and/or ATR.
Subunit Structure	Interacts with FANCD2; the interaction is direct. Interacts with FANCL. Interacts with MTMR15/FAN1. Interacts with POLN.
Similarity	The C-terminal 30 residues are probably required for function in DNA repair.
Subcellular Location	Nucleus. Note: Observed in spots localized in pairs on the sister chromatids of mitotic chromosome arms and not centromeres, one on each chromatids. These foci coincide with common fragile sites. They are frequently interlinked through BLM-associated ultra-fine DNA bridges.

ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-hFANCI antibody	Peptide ELISA (EIA)
Application Notes for anti-hFANCI antibody	Peptide ELISA: 1:20,000-1:40,000
Related Product Information for anti-hFANCI antibody	Plays an essential role in the repair of DNA double-strand breaks by homologous recombination and in the repair of interstrand DNA cross-links (ICLs) by promoting FANCD2 monoubiquitination by FANCL and participating in recruitment to DNA repair sites. Required for maintenance of chromosomal stability. Specifically binds branched DNA: binds both single-stranded DNA (ssDNA) and double-stranded DNA (dsDNA). Participates in S phase and G2 phase checkpoint activation upon DNA damage.
Other Notes	Small volumes of anti-hFANCI antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for hFANCI purchase	MBS9613548 is an antibody targeting hFANCI. Also known as hFANCI Antibody. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for hFANCI. It may not necessarily be applicable to this product.

NCBI GI #	212276518
NCBI GeneID	55215
NCBI Accession #	Q9NVI1.4
UniProt Primary Accession #	Q9NVI1
UniProt Secondary Accession #	Q96JN1; Q96ST0; Q9BT96; A4ZVE4; A5YMH4; A6NJZ0
UniProt Related Accession #	Q9NVI1
NCBI Official Full Name	Fanconi anemia group I protein
NCBI Official Synonym Full Names	Fanconi anemia, complementation group I
NCBI Official Symbol	FANCI
NCBI Official Synonym Symbols	KIAA1794
UniProt Protein Name	Fanconi anemia group I protein
UniProt Gene Name	FANCI
UniProt Synonym Gene Names	KIAA1794; Protein FACI
UniProt Entry Name	FANCI_HUMAN
NCBI Protein Information	Fanconi anemia group I protein
NCBI Summary for hFANCI	The Fanconi anemia complementation group (FANC) currently includes FANCA, FANCB, FANCC, FANCD1 (also called BRCA2), FANCD2, FANCE, FANCF, FANCG, FANCI, FANCJ (also called BRIP1), FANCL, FANCM and FANCN (also called PALB2). The previously defined group FANCH is the same as FANCA. Fanconi anemia is a genetically heterogeneous recessive disorder characterized by cytogenetic instability, hypersensitivity to DNA crosslinking agents, increased chromosomal breakage, and defective DNA repair. The members of the Fanconi anemia complementation group do not share sequence similarity; they are related by their assembly into a common nuclear protein complex. This gene encodes the protein for complementation group I. Alternative splicing results in two transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]

UniProt Comments for hFANCI	FANCI: Plays an essential role in the repair of DNA double- strand breaks by homologous recombination and in the repair of interstrand DNA cross-links (ICLs) by promoting FANCD2 monoubiquitination by FANCL and participating in recruitment to DNA repair sites. Required for maintenance of chromosomal stability. Specifically binds branched DNA: binds both single- stranded DNA (ssDNA) and double-stranded DNA (dsDNA). Participates in S phase and G2 phase checkpoint activation upon DNA damage. Defects in FANCI are a cause of Fanconi anemia complementation group I (FANCI). A disorder affecting all bone marrow elements and resulting in anemia, leukopenia and thrombopenia. It is associated with cardiac, renal and limb malformations, dermal pigmentary changes, and a predisposition to the development of malignancies. At the cellular level it is associated with hypersensitivity to DNA-damaging agents, chromosomal instability (increased chromosome breakage) and defective DNA repair. 4 isoforms of the human protein are produced by alternative splicing. Protein type: DNA repair, damage; Cell cycle regulation Chromosomal Location of Human Ortholog: 15q26.1 Cellular Component: nucleoplasm; membrane; cytoplasm; plasma membrane; nucleus Molecular Function: protein binding; DNA binding Biological Process: positive regulation of protein ubiquitination; cell cycle; DNA repair Disease: Fanconi Anemia, Complementation Group I; Tracheoesophageal Fistula With Or Without Esophageal Atresia
Research Articles on hFANCI	**1.** Our studies reveal a previously unknown mechanism for the coordinate nuclear import of a subset of FANCD2 and FANCI, a key early step in the cellular ICL response.
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