FANCD2 Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	FANCD2, Blocking Peptide
Full Product Name	FANCD2 Blocking Peptide
Product Gene Name	FANCD2 blocking peptide
Product Synonym Names	DKFZp762A223; FA 4; FA D2; FA4; FAC D2; FACD 2; FACD; FACD2; FACD2_HUMAN; FAD; FAD2; FANC D2; FANCD 2; FANCD; FANCD2; FANCONI ANEMIA COMPLEMENTATION GROUP D; Fanconi anemia complementation group D2; Fanconi anemia group D2 protein; FANCONI PANCYTOPENIA TYPE 4; FLJ23826; OTTHUMP00000158853; OTTHUMP00000207925; Protein FACD2; Type 4 Fanconi pancytopenia
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	FANCD2 peptide (MBS9626172) is used for blocking the activity of FANCD2 antibody (MBS9607456)
Molecular Weight	166,462 Da
Chromosome Location	Chromosome: 3; NC_000003.11 (10068113..10143614). Location: 3p26
OMIM	227646
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.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for FANCD2 blocking peptide	Blocking/Control
Related Product Information for FANCD2 blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of FANCD2 blocking peptide 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 FANCD2 purchase	MBS9626172 is a blocking peptide targeting FANCD2.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for FANCD2. It may not necessarily be applicable to this product.

NCBI GI #	66528888
NCBI GeneID	2177
NCBI Accession #	NP_001018125.1

UniProt Primary Accession #	Q9BXW9
UniProt Secondary Accession #	Q2LA86; Q69YP9; Q6PJN7; Q9BQ06; Q9H9T9
UniProt Related Accession #	Q9BXW9
GenBank Nucleotide #	NM_001018115.2
NCBI Official Full Name	Fanconi anemia group D2 protein isoform b
NCBI Official Synonym Full Names	Fanconi anemia, complementation group D2
NCBI Official Symbol	FANCD2
NCBI Official Synonym Symbols	FA4; FAD; FACD; FAD2; FA-D2; FANCD
UniProt Protein Name	Fanconi anemia group D2 protein
Protein Family	Fanconi anemia group D2 protein
UniProt Gene Name	FANCD2
UniProt Synonym Gene Names	FACD; Protein FACD2
UniProt Entry Name	FACD2_HUMAN
NCBI Protein Information	Fanconi anemia group D2 protein
NCBI Summary for FANCD2	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 D2. This protein is monoubiquinated in response to DNA damage, resulting in its localization to nuclear foci with other proteins (BRCA1 AND BRCA2) involved in homology-directed DNA repair. Alternative splicing results in two transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]

UniProt Comments for FANCD2	FANCD2: Required for maintenance of chromosomal stability. Promotes accurate and efficient pairing of homologs during meiosis. Involved in the repair of DNA double-strand breaks, both by homologous recombination and single-strand annealing. May participate in S phase and G2 phase checkpoint activation upon DNA damage. Plays a role in preventing breakage and loss of missegregating chromatin at the end of cell division, particularly after replication stress. Required for the targeting, or stabilization, of BLM to non-centromeric abnormal structures induced by replicative stress. Promotes BRCA2/FANCD1 loading onto damaged chromatin. May also be involved in B-cell immunoglobulin isotype switching. Interacts directly with FANCE and FANCI. Interacts with USP1 and MEN1. The ubiquitinated form specifically interacts with BRCA1 and BLM. Both the nonubiquitinated and the monoubiquitinated forms interact with BRCA2; this interaction is mediated by phosphorylated FANCG and the complex also includes XCCR3. The ubiquitinated form specifically interacts with MTMR15/FAN1 (via UBZ-type zinc finger), leading to recruit MTMR15/FAN1 to sites of DNA damage. Interacts with DCLRE1B/Apollo. Highly expressed in germinal center cells of the spleen, tonsil, and reactive lymph nodes, and in the proliferating basal layer of squamous epithelium of tonsil, esophagus, oropharynx, larynx and cervix. Expressed in cytotrophoblastic cells of the placenta and exocrine cells of the pancreas. Highly expressed in testis, where expression is restricted to maturing spermatocytes. 4 isoforms of the human protein are produced by alternative splicing. Protein type: DNA repair, damage Chromosomal Location of Human Ortholog: 3p26 Cellular Component: nucleoplasm; Golgi apparatus; intracellular membrane-bound organelle; condensed chromosome Molecular Function: protein binding Biological Process: gamete generation; synapsis; response to gamma radiation; DNA repair Disease: Tracheoesophageal Fistula With Or Without Esophageal Atresia; Fanconi Anemia, Complementation Group D2
Research Articles on FANCD2	**1.** FANCD2 protein and the Fanconi anemia pathway are essential to protect human lymphoblastoid cells against formaldehyde toxicity.
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