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FANCD2 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21536c

Product Information

Application	WB, E
Primary Accession	Q9BXW9
Reactivity	Human
Predicted	Canine
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB49367
Calculated MW	164128

Additional Information

Gene ID	2177
Other Names	Fanconi anemia group D2 protein, Protein FACD2, FANCD2, FACD
Target/Specificity	This FANCD2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 893-927 amino acids from the Central region of human FANCD2.
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	FANCD2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FANCD2
Synonyms	FACD
Function	Required for maintenance of chromosomal stability (PubMed: 11239453, PubMed:14517836). Promotes accurate and efficient pairing of homologs during meiosis (PubMed:14517836). Involved in the repair of DNA

	double-strand breaks, both by homologous recombination and single-strand annealing (PubMed:15671039, PubMed:15650050, PubMed:30335751, PubMed:36385258). The FANCI-FANCD2 complex binds and scans double-stranded DNA (dsDNA) for DNA damage; this complex stalls at DNA junctions between double-stranded DNA and single-stranded DNA (By similarity). May participate in S phase and G2 phase checkpoint activation upon DNA damage (PubMed:15377654). Plays a role in preventing breakage and loss of missegregating chromatin at the end of cell division, particularly after replication stress (PubMed:15454491, PubMed:15661754). Required for the targeting, or stabilization, of BLM to non-centromeric abnormal structures induced by replicative stress (PubMed:15661754, PubMed:19465921). Promotes BRCA2/FANCD1 loading onto damaged chromatin (PubMed:11239454, PubMed:12239151, PubMed:12086603, PubMed:15115758, PubMed:15199141, PubMed:15671039, PubMed:18212739). May also be involved in B-cell immunoglobulin isotype switching.
Cellular Location	Nucleus Note=Concentrates in nuclear foci during S phase and upon genotoxic stress. At the onset of mitosis, excluded from chromosomes and diffuses into the cytoplasm, returning to the nucleus at the end of cell division. Observed in a few 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 and could be sites of replication fork stalling. The foci are frequently interlinked through BLM-associated ultra-fine DNA bridges. Following aphidicolin treatment, targets chromatid gaps and breaks
Tissue Location	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 (at protein level). Highly expressed in testis, where expression is restricted to maturing spermatocytes

Background

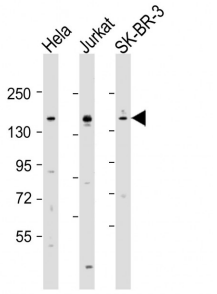
Required for maintenance of chromosomal stability. Promotes accurate and efficient pairing of homologs during meiosis. Involved in the repair of DNA double-strand breaks, both by homologous recombination and single-strand annealing. May participate in S phase and G2 phase checkpoint activation upon DNA 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.

References

Timmers C.,et al.Mol. Cell 7:241-248(2001).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Garcia-Higuera I.,et al.Mol. Cell 7:249-262(2001).
Taniguchi T.,et al.Blood 100:2414-2420(2002).

Images

All lanes : Anti-FANCD2 Antibody (Center) at 1:2000



dilution Lane 1: Hela whole cell lysates Lane 2: Jurkat whole cell lysates Lane 3: SK-BR-3 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 166 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.