

# FANCD2 Antibody

Rabbit mAb Catalog # AP90768

### **Product Information**

**Application** WB, IHC, IF, ICC, IP, IHF

Primary Accession Q9BXW9

Reactivity Rat, Human, Mouse

**Clonality** Monoclonal

Other Names FA D2; FA4; FAC D2; FACD 2; FACD; FACD2; FAD2; FANCD 2; FANCD;

FANCD2; Fanconi anemia group D2 protein; FLJ23826; Protein FACD2; Type 4

Fanconi pancytopenia;

IsotypeRabbit IgGHostRabbitCalculated MW164128

## **Additional Information**

**Dilution** WB 1:1000~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:50

**Purification** Affinity-chromatography

Immunogen A synthesized peptide derived from human FANCD2

**Description** 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.

Storage Condition and Buffer Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium

azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term.

Avoid freeze / thaw cycle.

#### **Protein Information**

Name FANCD2

**Synonyms** FACD

**Function** Required for maintenance of chromosomal stability (PubMed: <u>11239453</u>,

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:<u>15454491</u>, PubMed:<u>15661754</u>). Required for the targeting, or stabilization, of BLM to non-centromeric abnormal structures induced by replicative stress (PubMed:<u>15661754</u>, PubMed:<u>19465921</u>).

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.

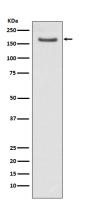
#### **Cellular Location**

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

## **Images**



Western blot analysis of FANCD2 expression in HeLa cell lysate.

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Immunohistochemical analysis of paraffin-embedded human spleen, using FANCD2 Antibody.

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