

FANCD2 Antibody (clone 103) Mouse Monoclonal Antibody Catalog # ALS11284

Specification

FANCD2 Antibody (clone 103) - Product Information

Application Primary Accession Reactivity Host Clonality Calculated MW IHC <u>09BXW9</u> Human Mouse Monoclonal 164kDa KDa

FANCD2 Antibody (clone 103) - Additional Information

Gene ID 2177

Other Names Fanconi anemia group D2 protein, Protein FACD2, FANCD2, FACD

Target/Specificity Human FANCD2 fusion protein

Reconstitution & Storage +4°C or -20°C, Avoid repeated freezing and thawing.

Precautions FANCD2 Antibody (clone 103) is for research use only and not for use in diagnostic or therapeutic procedures.

FANCD2 Antibody (clone 103) - Protein Information

Name FANCD2

Synonyms FACD

Function

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.

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

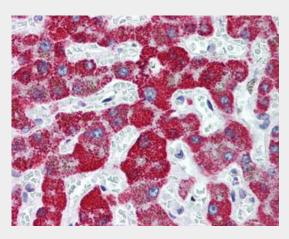
Highly expressed in germinal center cells of the spleen, tonsil, and reactive lymph nodes, and in the proliferating basal layer of squamous epithelium of tonsil, esophagus, oropharynx, larynx and cervix. Expressed in cytotrophoblastic cells of the placenta and exocrine cells of the pancreas (at protein level). Highly expressed in testis, where expression is restricted to maturing spermatocytes

FANCD2 Antibody (clone 103) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

FANCD2 Antibody (clone 103) - Images



Anti-FANCD2 antibody IHC of human liver.

FANCD2 Antibody (clone 103) - 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.



FANCD2 Antibody (clone 103) - 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).