

Product datasheet

Anti-FANCD2 antibody ab111269

2 Images

Overview

Product name	Anti-FANCD2 antibody
Description	Rabbit polyclonal to FANCD2
Host species	Rabbit
Tested applications	Suitable for: IHC-P
Species reactivity	Reacts with: Human Predicted to work with: Rhesus monkey, Gorilla 
Immunogen	Synthetic peptide, corresponding to a region between residues 1401 and 1451 of Human FANCD2 (NP_001018125.1).
Positive control	Human Breast Carcinoma, Colon Carcinoma, Lung Adenocarcinoma, Prostate Carcinoma and Testicular Seminoma tissues.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: Tris buffered saline, 0.1% BSA
Purity	Immunogen affinity purified
Purification notes	ab111269 was affinity purified using an epitope specific to FANCD2 immobilized on solid support.
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab111269** in the following tested applications.

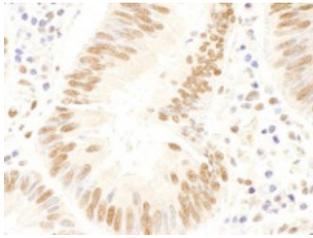
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100 - 1/500. Epitope exposure is recommended. Epitope exposure with citrate buffer will enhance staining.

Target

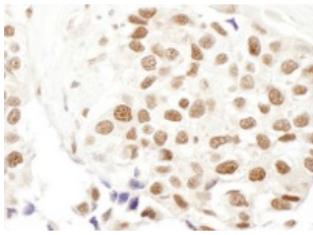
Function	Required for maintenance of chromosomal stability. Promotes accurate and efficient pairing of homologs during meiosis. Involved in the repair of DNA double-strand breaks, both by homologous recombination and single-strand annealing. May participate in S phase and G2 phase checkpoint activation upon DNA damage. Promotes BRCA2/FANCD1 loading onto damaged chromatin. May also be involved in B-cell immunoglobulin isotype switching.
Tissue specificity	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.
Involvement in disease	Defects in FANCD2 are a cause of Fanconi anemia complementation group D type 2 (FANCD2) [MIM:227646]. It is 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.
Developmental stage	Highly expressed in fetal oocytes, and in hematopoietic cells of the fetal liver and bone marrow (at protein level).
Domain	The C-terminal 24 residues of isoform 2 are required for its function.
Post-translational modifications	Monoubiquitinated on Lys-561 during S phase and upon genotoxic stress (isoform 1 and isoform 2). 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, RPA1 and ATR, and is mediated by FANCL/PHF9. Ubiquitination is required for binding to chromatin, interaction with BRCA1, BRCA2 and MTMR15/FAN1, DNA repair, and normal cell cycle progression, but not for phosphorylation on Ser-222 or interaction with MEN1. Phosphorylated in response to various genotoxic stresses by ATM and/or ATR. Upon ionizing radiation, phosphorylated by ATM on Ser-222 and Ser-1404. Phosphorylation on Ser-222 is required for S-phase checkpoint activation, but not for ubiquitination, foci formation, or DNA repair. In contrast, phosphorylation by ATR on other sites may be required for ubiquitination and foci formation.
Cellular localization	Nucleus. Concentrates in nuclear foci during S phase and upon genotoxic stress.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FANCD2 antibody (ab111269)

ab111269 at 1/250 dilution staining FANCD2 in Human colon carcinoma by Immunohistochemistry, Formalin-fixed, Paraffin-embedded tissue. Detection: DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FANCD2 antibody (ab111269)

ab111269 at 1/250 dilution staining FANCD2 in Human breast carcinoma by Immunohistochemistry, Formalin-fixed, Paraffin-embedded tissue. Detection: DAB staining.

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