abcam

ab273628

Anti-FANCI antibody [EPR23903-124] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR23903-124
Purification technique	Affinity purification Protein A
Concentration	1.005 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information FANCI

Function	Plays an essential role in the repair of DNA double-strand breaks by homologous recombination and in the repair of interstrand DNA cross-links (ICLs) by promoting FANCD2 monoubiquitination by FANCL and participating in recruitment to DNA repair sites (PubMed:17412408, PubMed:17460694, PubMed:17452773, PubMed:19111657, 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 (PubMed:19589784). Participates in S phase and G2 phase checkpoint activation upon DNA damage (PubMed:25862789).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab273628 is the carrier-free version of ab245219.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	FANCI also known as Fanconi anemia group I protein is an important player in DNA repair processes. This protein has a molecular mass of approximately 150 kDa. It is ubiquitously expressed with notable levels found in tissues that undergo high rates of cell division. FANCI participates mechanically within the DNA repair mechanism by interacting directly with DNA alongside its partner protein FANCD2 to form a tight complex that recognizes and binds to sites of DNA damage.
Biological function summary	The FANCI protein acts as part of the multiprotein Fanconi anemia (FA) core complex. This complex Functions in the repair of DNA interstrand crosslinks which are severe forms of DNA damage. Successful function of FANCI is important for maintaining genomic stability and subsequently proper cell cycle progression. It

	partners with proteins including FANCD2 to coordinate the homologous recombination repair process. Defective FANCI leads to disrupted DNA repair resulting in cellular damage and apoptosis.
Pathways	FANCI plays a major role in the Fanconi anemia pathway and the broader DNA damage response system. The FA pathway which involves over 20 proteins forms a network integral in repairing DNA crosslinks. FANCI tightly interacts with proteins like FANCD2 to initiate DNA repair in response to damage. The successful coordination of these proteins ensures the stability of genetic material throughout the cell cycle affecting cell fate decisions such as survival or apoptosis.
Associated diseases and disorders	FANCI mutations are directly linked to Fanconi anemia a genetic disorder characterized by bone marrow failure and increased cancer risk. Mutations can impair the protein's function causing defective DNA repair capability. Additionally FANCI's involvement in DNA repair associates it with breast cancer where malfunction or reduced expression of FANCI is observed. The protein interacts with tumor suppressors like BRCA1 and BRCA2 linking it to pathways involved in hereditary breast cancer predisposition.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

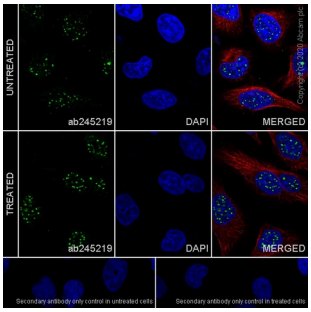
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images

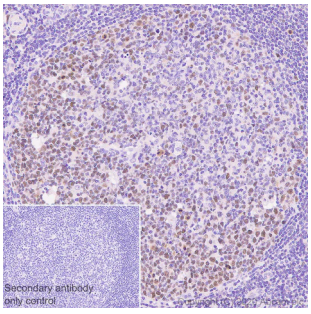


Immunocytochemistry/ Immunofluorescence - Anti-FANCI antibody [EPR23903-124] - BSA and Azide free (ab273628)

FANCI Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-FANCI antibody

Immunofluorescent analysis of 100% methanol-fixed HeLa cells labelling FANCI with ab245219 at 1/100 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing nuclear foci staining in HeLa cell line, the signal increased a little after treatment with Mitomycin C (500ng/ml) for 6h. FANCI forms nuclear foci in cells in the absence or presence of exogenous DNA damage (PMID: 19561358). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab245219).



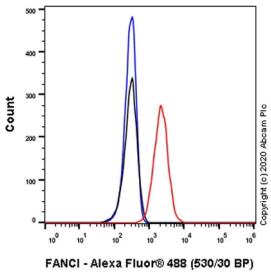
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FANCI antibody [EPR23903-124] - BSA and Azide free (ab273628)

FANCI Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FANCI antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling FANCI with ab245219 at 1/4000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining in human tonsil. The section was incubated with ab245219 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 10 mins.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab245219).

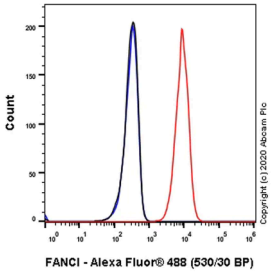


Flow Cytometry (Intracellular) - Anti-FANCI antibody [EPR23903-124] - BSA and Azide free (ab273628)

FANCI Flow Cytometry (Intracellular) staining using rabbit Anti-FANCI antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling FANCI with ab245219 at 1/600 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).
A Goat anti rabbit IgG (Alexa Fluor®488, ab150077) at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab245219).

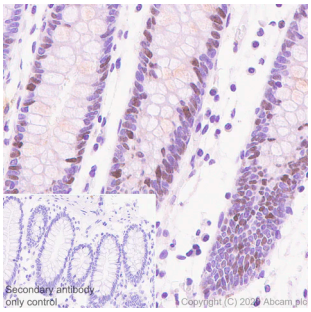


Flow Cytometry (Intracellular) - Anti-FANCI antibody [EPR23903-124] - BSA and Azide free (ab273628)

FANCI Flow Cytometry (Intracellular) staining using rabbit Anti-FANCI antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized Jurkat (Human T cell leukemia T lymphocyte) cells labelling FANCI with ab245219 at 1/600 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).
A Goat anti rabbit IgG (Alexa Fluor®488, ab150077) at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab245219).



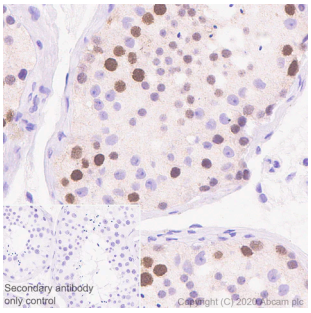
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FANCI antibody [EPR23903-124] - BSA and Azide free (ab273628)

FANCI Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-FANCI antibody

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling FANCI with ab245219 at 1/4000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining in human colon. The section was incubated with ab245219 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 10 mins.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab245219).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FANCI antibody [EPR23903-124] - BSA and Azide free (ab273628)

Immunohistochemical analysis of paraffin-embedded Human testis tissue labeling FANCI with ab245219 at 1/4000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining in human testis (PMID: 31219578). The section was incubated with ab245219 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 10 mins.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab245219).

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