

Product datasheet

Anti-FANCI antibody [EPR23903-124] ab245219

Recombinant RabMAb

[1 References](#) [9 Images](#)

Overview

Product name	Anti-FANCI antibody [EPR23903-124]
Description	Rabbit monoclonal [EPR23903-124] to FANCI
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), IHC-P, WB, ICC/IF Unsuitable for: IP
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa, HeLa treated with 500ng/ml Mitomycin C for 6h, whole, Jurkat and Raji whole cell lysates; Human testis tissue lysate. IHC-P: Human testis, colon and tonsil tissue. ICC/IF: HeLa cells. Flow Cyt (intra): HeLa and Jurkat cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR23903-124

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab245219 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
Flow Cyt (Intra)		1/600.
IHC-P		1/4000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		1/2000. Detects a band of approximately 149 kDa (predicted molecular weight: 149 kDa).
ICC/IF		1/100.

Application notes

Is unsuitable for IP.

Target

Function

Required for maintenance of chromosomal stability. Involved in the repair of DNA double-strand breaks by homologous recombination and in the repair of DNA cross-links. Participates in S phase and G2 phase checkpoint activation upon DNA damage. Promotes FANCD2 ubiquitination and recruitment to DNA repair sites.

Involvement in disease

Defects in FANCI are a cause of Fanconi anemia complementation group I (FANCI) [MIM:609053]. 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.

Domain

The C-terminal 30 residues are probably required for function in DNA repair.

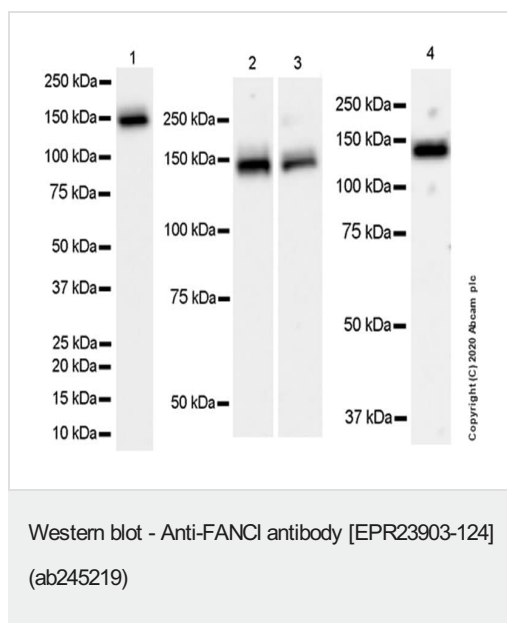
Post-translational modifications

Monoubiquitinated on Lys-523 during S phase and upon genotoxic stress. 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. Ubiquitination is required for binding to chromatin, DNA repair, and normal cell cycle progression. Phosphorylated in response to DNA damage by ATM and/or ATR.

Cellular localization

Nucleus. Concentrates in nuclear foci upon genotoxic stress.

Images



All lanes : Anti-FANCI antibody [EPR23903-124] (ab245219) at 1/5000 dilution

Lane 1 : HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 2 : Jurkat (human t cell leukemia T lymphocyte) whole cell lysate

Lane 3 : Raji (human burkitts lymphoma B lymphocyte) whole cell lysate

Lane 4 : Human testis tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

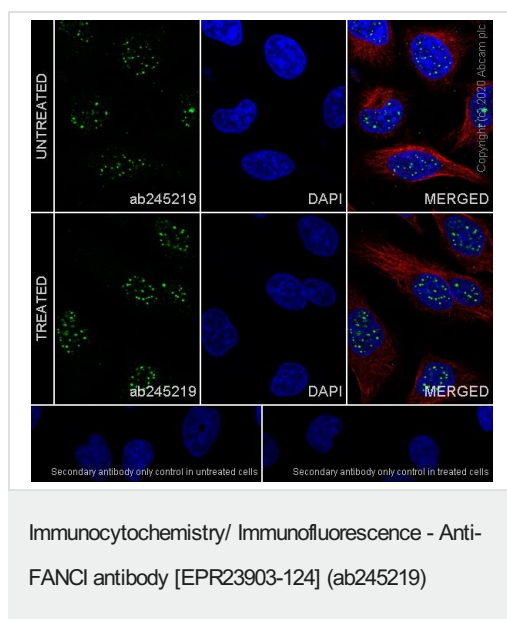
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) at 1/50000 dilution

Predicted band size: 149 kDa

Observed band size: 149 kDa

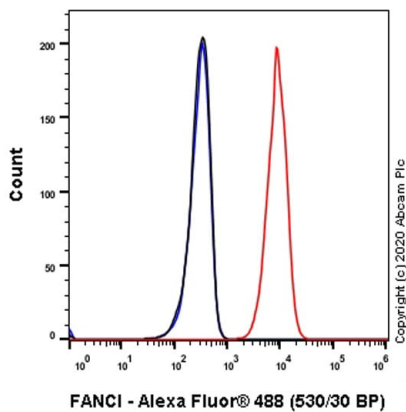
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Exposure times: Lanes 1-3: 26 seconds; Lane 4: 125 seconds.



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).

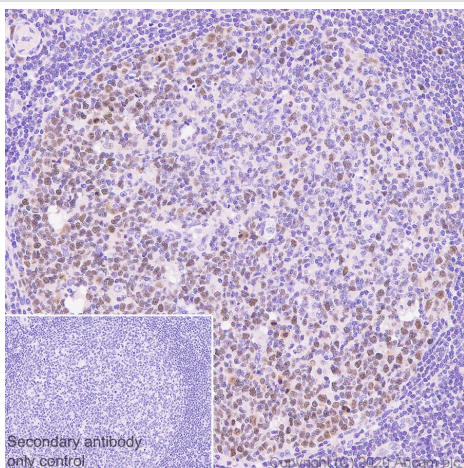
Secondary antibody only control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-FANCI antibody
[EPR23903-124] (ab245219)

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.

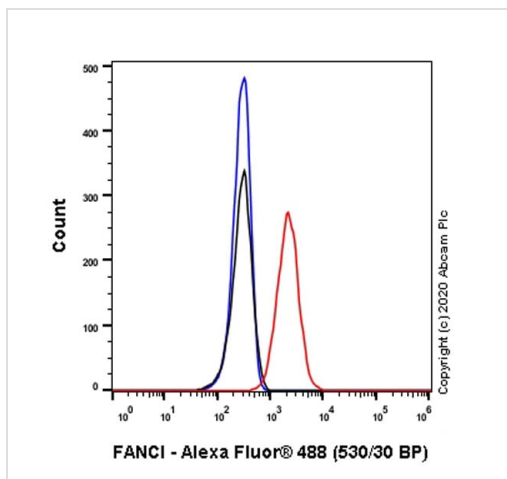


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FANCI antibody
[EPR23903-124] (ab245219)

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**).

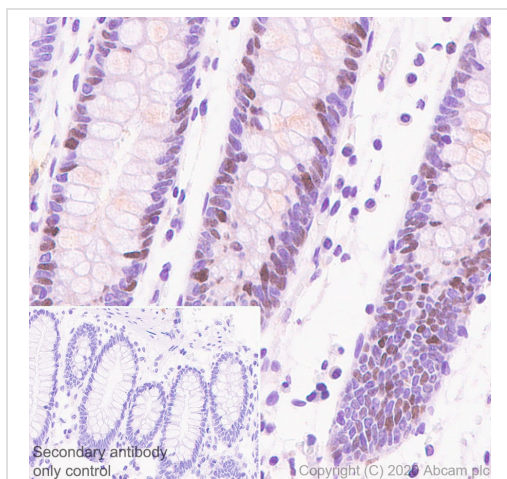
Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 10 mins.



Flow Cytometry (Intracellular) - Anti-FANCI antibody
[EPR23903-124] (ab245219)

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 (0.1 µg) (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.

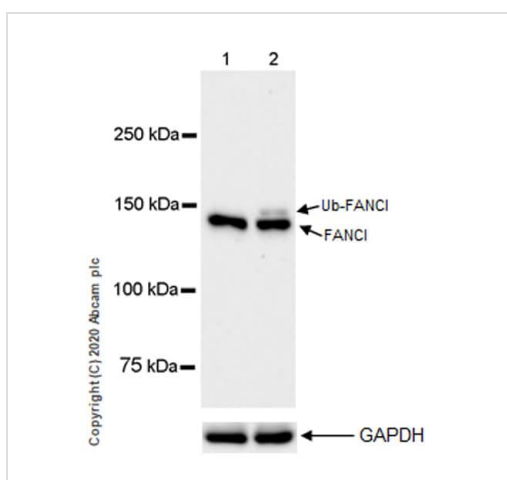


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FANCI antibody
[EPR23903-124] (ab245219)

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.



Western blot - Anti-FANCI antibody [EPR23903-124]
(ab245219)

All lanes : Anti-FANCI antibody [EPR23903-124] (ab245219) at 1/2000 dilution

Lane 1 : Untreated HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 2 : HeLa treated with 500 ng/ml Mitomycin C for 6h, whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) at 1/100000 dilution

Predicted band size: 149 kDa

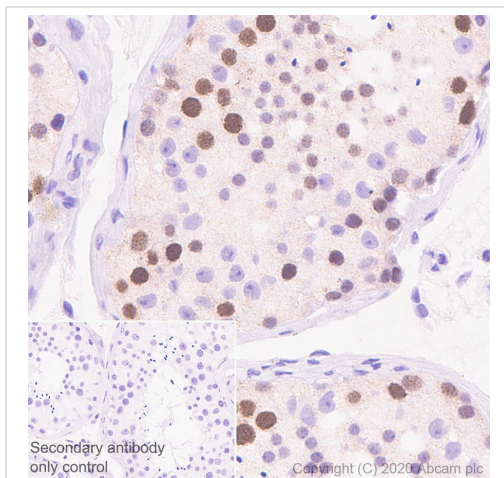
Observed band size: 149 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The more slowly migrating band is a monoubiquitinated form of FANCI, which can be induced by Mitomycin C treatment.

The expression profile observed is consistent with what has been described in the literature (PMID: 17460694).

Exposure time: 70 seconds.



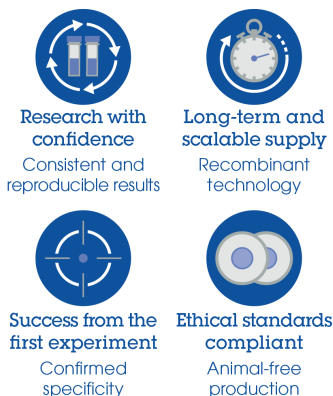
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FANCI antibody [EPR23903-124] (ab245219)

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.

Why choose a recombinant antibody?



Anti-FANCI antibody [EPR23903-124] (ab245219)

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