

FANCI (S-15): sc-104234

BACKGROUND

Fanconi anemia (FA) is an autosomal recessive disorder characterized by bone marrow failure, birth defects and chromosomal instability. At the cellular level, FA is characterized by spontaneous chromosomal breakage and a unique hypersensitivity to DNA cross-linking agents. FANCI (fanconi anemia, complementation group I), also known as KIAA1794, is a 1,328 amino acid protein that localizes to the nucleus and is subject to monoubiquitination and DNA damage-dependent phosphorylation. Interacting directly with FANCD2, FANCI is required for the maintenance of chromosomal stability and is also involved in DNA recombination and repair in response to double-strand breaks and DNA cross-links. Defects in the gene encoding FANCI are associated with the pathogenesis of FA. FANCI is expressed as four alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 15.

REFERENCES

1. Nagase, T., et al. 2001. Prediction of the coding sequences of unidentified human genes. XX. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 8: 85-95.
2. Smogorzewska, A., et al. 2007. Identification of the FANCI protein, a monoubiquitinated FANCD2 paralog required for DNA repair. Cell 129: 289-301.
3. Dorsman, J.C., et al. 2007. Identification of the fanconi anemia complementation group I gene, FANCI. Cell. Oncol. 29: 211-218.
4. Sims, A.E., et al. 2007. FANCI is a second monoubiquitinated member of the fanconi anemia pathway. Nat. Struct. Mol. Biol. 14: 564-567.
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7. Ishiai, M., et al. 2008. FANCI phosphorylation functions as a molecular switch to turn on the fanconi anemia pathway. Nat. Struct. Mol. Biol. 15: 1138-1146.

CHROMOSOMAL LOCATION

Genetic locus: FANCI (human) mapping to 15q26.1; Fanci (mouse) mapping to 7 D3.

SOURCE

FANCI (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FANCI of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104234 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FANCI (S-15) is recommended for detection of FANCI of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FANCI (S-15) is also recommended for detection of FANCI in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FANCI siRNA (h): sc-90074, FANCI siRNA (m): sc-105350, FANCI shRNA Plasmid (h): sc-90074-SH, FANCI shRNA Plasmid (m): sc-105350-SH, FANCI shRNA (h) Lentiviral Particles: sc-90074-V and FANCI shRNA (m) Lentiviral Particles: sc-105350-V.

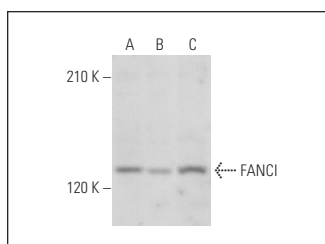
Molecular Weight of FANCI: 150 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MDA-MB-231 cell lysate: sc-2232 or U-2 OS cell lysate: sc-2295.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



FANCI (S-15): sc-104234. Western blot analysis of FANCI expression in MDA-MB-231 (A) and U-2 OS (B) whole cell lysates and HeLa nuclear extract (C).

RESEARCH USE

For research use only, not for use in diagnostic procedures.