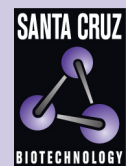


FANCC (V-20): sc-18109



The Power to Question

BACKGROUND

Fanconi anemia (FA) is an autosomal recessive disorder characterized by bone marrow failure, birth defects and chromosomal instability. The FA Group C complementation group gene encodes the protein FANCC, which is located in both cytoplasmic and nuclear compartments. FANCC is expressed in a cell cycle-dependent manner, with the lowest levels at the G1/S boundary and the highest levels in the M-phase. The FANCC protein interacts with other FA complementation group proteins as well as non-FA proteins. A 230 kDa human α spectrin II acts as a scaffold to enhance interactions between FANCC and FANCA to form a nuclear complex. Another binding partner of FANCC is the BTB/POZ domain containing protein FAZF, which is a transcriptional repressor. In hematopoietic cells expressing mutant FANCC, PKR is constitutively phosphorylated and has increased binding affinity for double-stranded RNA, which suggests that FANCC indirectly suppresses the activity of PKR. These cells are apoptotic and are hypersensitive to IFN γ and TNF α . In addition, FANCC protein is involved in the activation of STAT1 through receptors for at least three hematopoietic growth and survival factors.

REFERENCES

1. McMahon, L.W., et al. 1999. Human alpha spectrin II and the Fanconi anemia proteins FANCA and FANCC interact to form a nuclear complex. *J. Biol. Chem.* 274: 32904-32908.
2. Hoatlin, M.E., et al. 1999. A novel BTB/POZ transcriptional repressor protein interacts with the Fanconi anemia group C protein and PLZF. *Blood* 94: 3737-3747.
3. Kruyt, F.A., et al. 1999. Resistance to mitomycin C requires interaction between the Fanconi anemia proteins FANCA and FANCC in the nucleus through an arginine-rich domain. *J. Biol. Chem.* 274: 34212-34218.
4. Kupfer, G., et al. 1999. A patient-derived mutant form of the Fanconi anemia protein, FANCA, is defective in nuclear accumulation. *Exp. Hematol.* 27: 587-593.

CHROMOSOMAL LOCATION

Genetic locus: FANCC (human) mapping to 9q22.32.

SOURCE

FANCC (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FANCC of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-18109 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

FANCC (V-20) is recommended for detection of FANCC of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FANCC siRNA (h): sc-35354, FANCC shRNA Plasmid (h): sc-35354-SH and FANCC shRNA (h) Lentiviral Particles: sc-35354-V.

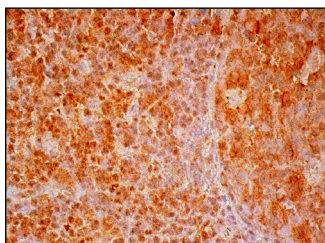
Molecular Weight of FANCC: 60 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, MOLT-4 nuclear extract: sc-2151 or Jurkat nuclear extract: sc-2132.

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 Blotting A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



FANCC (V-20): sc-18109. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear and cytoplasmic staining of cells in germinal centers and cells in non-germinal centers.

RESEARCH USE

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

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Satisfaction
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Try **FANCC (6E7): sc-293308**, our highly recommended monoclonal alternative to FANCC (V-20).