

# FANCC (C-14): sc-18110

## 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 G<sub>1</sub>/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 human  $\alpha$  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- $\gamma$  and TNF $\alpha$ . In addition, FANCC protein is involved in the activation of Stat1 through receptors for at least three hematopoietic growth and survival factors.

## CHROMOSOMAL LOCATION

Genetic locus: FANCC (human) mapping to 9q22.32; FancC (mouse) mapping to 13 B3.

## SOURCE

FANCC (C-14) is available as either goat (sc-18110) or rabbit (sc18110-R) polyclonal affinity purified antibody raised against a peptide mapping near the C-terminus of FANCC of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-18110 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

FANCC (C-14) is recommended for detection of FANCC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

FANCC (C-14) is also recommended for detection of FANCC in additional species, including equine, canine and porcine.

Suitable for use as control antibody for FANCC siRNA (h): sc-35354, FANCC siRNA (m): sc-35355, FANCC shRNA Plasmid (h): sc-35354-SH, FANCC shRNA Plasmid (m): sc-35355-SH, FANCC shRNA (h) Lentiviral Particles: sc-35354-V and FANCC shRNA (m) Lentiviral Particles: sc-35355-V.

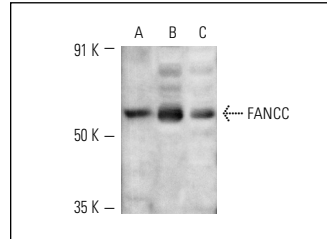
Molecular Weight of FANCC: 60 kDa.

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

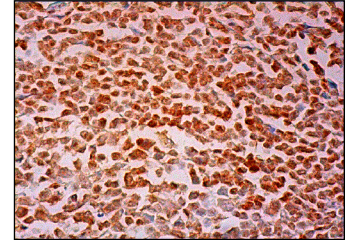
## STORAGE

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

## DATA



FANCC (C-14): sc-18110. Western blot analysis of FANCC expression in K-562 (A), MOLT-4 (B) and Jurkat (C) nuclear extracts.



FANCC (C-14): sc-18110. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of cells in germinal centers and cells in non-germinal centers.

## SELECT PRODUCT CITATIONS

- Gordon, S., et al. 2005. FANCC, FANCE, and FANCD2 form a ternary complex essential to the integrity of the Fanconi anemia DNA damage response pathway. *J. Biol. Chem.* 280: 36118-36125.
- Sinha, S., et al. 2008. Alterations in candidate genes PHF2, FANCC, PTCH1 and XPA at chromosomal 9q22.3 region: pathological significance in early- and late-onset breast carcinoma. *Mol. Cancer* 7: 84.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **FANCC (6E7): sc-293308**, our highly recommended monoclonal alternative to FANCC (C-14).