SANTA CRUZ BIOTECHNOLOGY, INC.

FANCE (2346C5a): sc-130638

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. At least eight complementation groups (A-G) have been identified and six FA genes (for subtypes A, C, D2, E F, and G) have been cloned. The FA proteins lack sequence homologies or motifs that could point to a molecular function. Phosphorylation of FANC (Fanconi anemia complementation group) proteins is thought to be important for the function of the FA pathway. FA proteins encoded by six cloned FA genes (FANCA, FANCC, FANCD2, FANCE, FANCF and FANCG) cooperate in a common pathway, culminating in the monoubiquitination of FANCD2 protein and the co-localization of FANCD2 and BRCA1 proteins in nuclear foci. The human FANCE gene maps to chromosome 6p21.31, contains 10 exons and encodes a novel 536 amino acid protein with two potential nuclear localization signals.

REFERENCES

1. de Winter, J.P., et al. 2000. The Fanconi anemia protein FANCF forms a nuclear complex with FANCA, FANCC and FANCG. Hum. Mol. Genet. 9: 2665-2674.
2. de Winter, J.P., et al. 2000. Isolation of a cDNA representing the Fanconi anemia complementation group E gene. Am. J. Hum. Genet. 67: 1306-1308.
3. Yagasaki, H., et al. 2001. A cytoplasmic serine protein kinase binds and may regulate the Fanconi anemia protein FANCA. Blood 98: 3650-3657.
4. Wilson, J.B., et al. 2001. The Chinese hamster FANCG/XRCC9 mutant NM3 fails to express the monoubiquitinated form of the FANCD2 protein, is hypersensitive to a range of DNA damaging agents and exhibits a normal level of spontaneous sister chromatid exchange. Carcinogenesis 22: 1939-1946.
5. Siddique, M.A., et al. 2001. Function of the Fanconi anemia pathway in Fanconi anemia complementation group F and D1 cells. Exp. Hematol. 29: 1448-1455.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 600901. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: FANCE (human) mapping to 6p21.31.

SOURCE

FANCE (2346C5a) is a mouse monoclonal antibody raised against a recombinant protein corresponding an internal region of FANCE of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml PBS with < 0.1% sodium azide and 1.0% gelatin.

STORAGE

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

APPLICATIONS

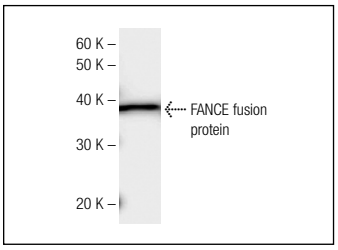
FANCE (2346C5a) is recommended for detection of FANCE of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for FANCE siRNA (h): sc-40569, FANCE shRNA Plasmid (h): sc-40569-SH and FANCE shRNA (h) Lentiviral Particles: sc-40569-V.

Molecular Weight of FANCE: 59 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

DATA



FANCE (2346C5a): sc-130638. Western blot analysis of human recombinant FANCE fusion protein.

RESEARCH USE

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

PROTOCOLS

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