SANTA CRUZ BIOTECHNOLOGY, INC.

FANCE (H-300): sc-28217

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 colocalization of FANCD2 and BRCA1 proteins in nuclear foci. The human FANCE gene maps to chromosome 6p22.31, contains 10 exons and encodes a novel 536 amino acid protein with 2 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. Yagasaki, H., et al. 2001. A cytoplasmic serine protein kinase binds and may regulate the Fanconi anemia protein FANCA. Blood 98: 3650-3657.
3. 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.
4. 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.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 603467. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: FANCE (human) mapping to 6p21.31; Fance (mouse) mapping to 17 A3.3.

SOURCE

FANCE (H-300) is a rabbit polyclonal antibody raised against amino acids 237-536 mapping at the C-terminus of FANCE of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

FANCE (H-300) is recommended for detection of FANCE of human and, to a lesser extent, mouse and rat 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).

Suitable for use as control antibody for FANCE siRNA (h): sc-40569, FANCE siRNA (m): sc-145063, FANCE shRNA Plasmid (h): sc-40569-SH, FANCE shRNA Plasmid (m): sc-145063-SH, FANCE shRNA (h) Lentiviral Particles: sc-40569-V and FANCE shRNA (m) Lentiviral Particles: sc-145063-V.

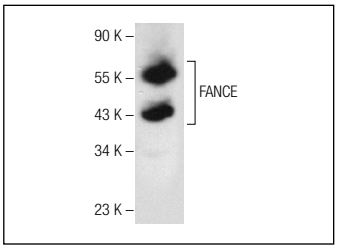
Molecular Weight of FANCE: 59 kDa.

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

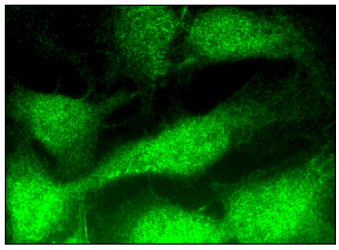
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



FANCE (H-300): sc-28217. Western blot analysis of FANCE expression in Hep G2 whole cell lysate.



FANCE (H-300): sc-28217. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear and cytoplasmic localization.

STORAGE

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