

FANCE (B-1): sc-398558

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 hyper-sensitivity 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 FANCD2 (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 6p21.31, contains ten 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 hyper-sensitive to a range of DNA damaging agents and exhibits a normal level of spontaneous sister chromatid exchange. *Carcinogenesis* 22: 1939-1946.

CHROMOSOMAL LOCATION

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

SOURCE

FANCE (B-1) is a mouse monoclonal antibody raised against amino acids 237-536 mapping at the C-terminus of FANCE of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FANCE (B-1) is available conjugated to agarose (sc-398558 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398558 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398558 PE), fluorescein (sc-398558 FITC), Alexa Fluor® 488 (sc-398558 AF488), Alexa Fluor® 546 (sc-398558 AF546), Alexa Fluor® 594 (sc-398558 AF594) or Alexa Fluor® 647 (sc-398558 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398558 AF680) or Alexa Fluor® 790 (sc-398558 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

FANCE (B-1) is recommended for detection of FANCE of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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.

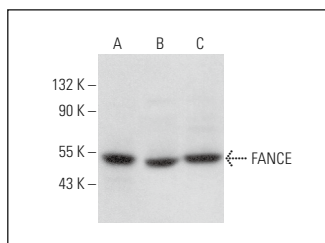
Molecular Weight of FANCE: 59 kDa.

Positive Controls: human platelet extract: sc-363773, Hep G2 cell lysate: sc-2227 or THP-1 cell lysate: sc-2238.

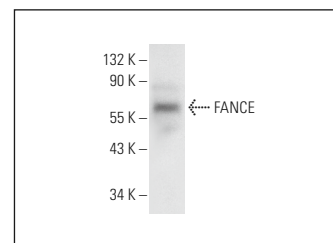
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



FANCE (B-1): sc-398558. Western blot analysis of FANCE expression in Hep G2 (A), THP-1 (B) and AN3 CA (C) whole cell lysates.



FANCE (B-1): sc-398558. Western blot analysis of FANCE expression in human platelet extract.

SELECT PRODUCT CITATIONS

1. Yu, X.H., et al. 2021. TGF-β2-induced NEAT1 regulates lens epithelial cell proliferation, migration and EMT by the miR-26a-5p/FANCE axis. *Int. J. Ophthalmol.* 14: 1674-1682.

STORAGE

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

RESEARCH USE

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