

FANCL (h2): 293T Lysate: sc-117142

BACKGROUND

Defects in FANCL are a cause of Fanconi anemia. 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 have been identified and six FA genes (for subtypes A, C, D2, E, F and G) have been cloned. Phosphorylation of FANCL (Fanconi anemia complementation group) proteins is thought to be important for the function of the FA pathway. FA proteins cooperate in a common pathway, culminating in the monoubiquitination of FANCD2 protein and co-localization of FANCD2 and BRCA1 proteins in nuclear foci. FANCL is a ligase protein mediating the ubiquitination of FANCD2, a key step in the DNA damage pathway. FANCL may be required for proper primordial germ cell proliferation in the embryonic stage.

REFERENCES

1. Meetei, A.R., et al. 2003. A novel ubiquitin ligase is deficient in Fanconi anemia. *Nat. Genet.* 35: 165-170.
2. Kutler, D.I. and Auerbach, A.D. 2004. Fanconi anemia in Ashkenazi Jews. *Fam. Cancer* 3: 241-248.
3. Meetei, A.R., et al. 2004. X-linked inheritance of Fanconi anemia complementation group B. *Nat. Genet.* 36: 1219-1224.
4. Mi, J. and Kupfer, G.M. 2005. The Fanconi anemia core complex associates with chromatin during S phase. *Blood* 105: 759-766.
5. Fei, P., Yin, J. and Wang, W. 2005. New advances in the DNA damage response network of Fanconi anemia and BRCA proteins. FAAP95 replaces BRCA2 as the true FANCL protein. *Cell Cycle* 4: 80-86.
6. Meetei, A.R., et al. 2005. A human ortholog of archaeal DNA repair protein Hef is defective in Fanconi anemia complementation group M. *Nat. Genet.* 37: 958-963.

CHROMOSOMAL LOCATION

Genetic locus: FANCL (human) mapping to 2p16.1.

PRODUCT

FANCL (h2): 293T Lysate represents a lysate of human FANCL transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

FANCL (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive FANCL antibodies. Recommended use: 10-20 µl per lane.

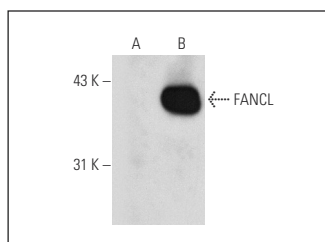
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

FANCL (C-4): sc-137076 is recommended as a positive control antibody for Western Blot analysis of enhanced human FANCL expression in FANCL transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

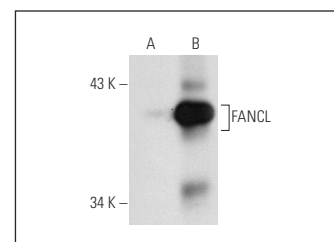
RECOMMENDED SUPPORT REAGENTS

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.

DATA



FANCL (C-4): sc-137076. Western blot analysis of FANCL expression in non-transfected: sc-117752 (A) and human FANCL transfected: sc-117142 (B) 293T whole cell lysates.



FANCL (B-11): sc-137067. Western blot analysis of FANCL expression in non-transfected: sc-117752 (A) and human FANCL transfected: sc-117142 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.