SANTA CRUZ BIOTECHNOLOGY, INC.

FANCL (K-12): sc-46114

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 8 complementation groups (A-G) have been identified and 6 FA genes (for subtypes A, C, D2, E, F and G) have been cloned. Phosphorylation of FANC (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 colocalization 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., et al. 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., et al. 2005. The Fanconi anemia core complex associates with chromatin during S phase. Blood 105: 759-766.
5. Fei, P., et al. 2005. New advances in the DNA damage response network of Fanconi anemia and BRCA proteins. FAAP95 replaces BRCA2 as the true FANCB 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; Fancl (mouse) mapping to 11 A3.3.

SOURCE

FANCL (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FANCL of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46114 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

FANCL (K-12) is recommended for detection of FANCL of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

FANCL (K-12) is also recommended for detection of FANCL in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FANCL siRNA (h): sc-45661, FANCL siRNA (m): sc-45662, FANCL shRNA Plasmid (h): sc-45661-SH, FANCL shRNA Plasmid (m): sc-45662-SH, FANCL shRNA (h) Lentiviral Particles: sc-45661-V and FANCL shRNA (m) Lentiviral Particles: sc-45662-V.

Molecular Weight of FANCL: 43 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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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