

FANCL (C-4): sc-137076

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 FANCD2 (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.

CHROMOSOMAL LOCATION

Genetic locus: *FANCL* (human) mapping to 2p16.1; *Fancl* (mouse) mapping to 11 A3.3.

SOURCE

FANCL (C-4) is a mouse monoclonal antibody raised against amino acids 76-375 mapping at the C-terminus of *FANCL* of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FANCL (C-4) is available conjugated to agarose (sc-137076 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137076 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137076 PE), fluorescein (sc-137076 FITC), Alexa Fluor® 488 (sc-137076 AF488), Alexa Fluor® 546 (sc-137076 AF546), Alexa Fluor® 594 (sc-137076 AF594) or Alexa Fluor® 647 (sc-137076 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137076 AF680) or Alexa Fluor® 790 (sc-137076 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FANCL (C-4) is recommended for detection of *FANCL* 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), immunohistochemistry (including paraffin-embedded sections) (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 *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.

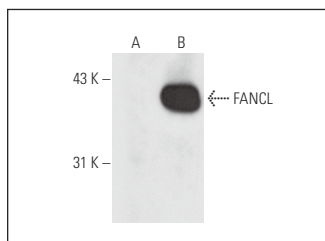
Molecular Weight of *FANCL*: 43 kDa.

Positive Controls: *FANCL* (h2): 293T Lysate: sc-117142 or Hep G2 cell lysate: sc-2227.

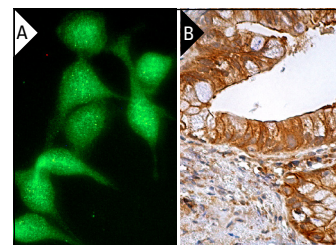
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

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 (C-4): sc-137076. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Jin, L., et al. 2018. MAST1 drives Cisplatin resistance in human cancers by rewiring cRaf-independent MEK activation. *Cancer Cell* 34: 315-330.e7.
- Shah, R.B., et al. 2021. *FANCL* functions as a repair/apoptosis switch in response to DNA crosslinks. *Dev. Cell* 56: 2207-2222.e7.

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.

PROTOCOLS

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

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