FANCB (C-13): sc-131514



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. FANCB (Fanconi anemia, complementation group B), also known as FACB, FA2 or FAB, is an 859 amino acid protein that exists as a component of the multi-subunit FA complex, which is composed of several different FANC proteins. Localized to the nucleus, FANCB functions as a DNA repair protein that is required for the ubiquitination of FANCD2 and helps to ensure proper DNA recombination. Defects in the gene encoding FANCB are the cause of Fanconi anemia complementation group B (FANCB), Fanconi anemia (FA) and X-linked VACTERL-H (XVACTERL-H), all of which are associated with chromosomal instability.

REFERENCES

- Joenje, H., Oostra, A.B., Wijker, M., di Summa, F.M., van Berkel, C.G., Rooimans, M.A., Ebell, W., van Weel, M., Pronk, J.C., Buchwald, M. and Arwert, F. 1997. Evidence for at least eight Fanconi anemia genes. Am. J. Hum. Genet. 61: 940-944.
- Meetei, A.R., Levitus, M., Xue, Y., Medhurst, A.L., Zwaan, M., Ling, C., Rooimans, M.A., Bier, P., Hoatlin, M., Pals, G., de Winter, J.P., Wang, W. and Joenje, H. 2004. X-linked inheritance of Fanconi anemia complementation group B. Nat. Genet. 36: 1219-1224.
- 3. 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 FANCB protein. Cell Cycle. 4: 80-86.
- Meetei, A.R., Medhurst, A.L., Ling, C., Xue, Y., Singh, T.R., Bier, P., Steltenpool, J., Stone, S., Dokal, I., Mathew, C.G., Hoatlin, M., Joenje, H., de Winter, J.P. and Wang, W. 2005. A human ortholog of archaeal DNA repair protein Hef is defective in Fanconi anemia complementation group M. Nat. Genet. 37: 958-963.
- 5. Holden, S.T., Cox, J.J., Kesterton, I., Thomas, N.S., Carr, C. and Woods, C.G. 2006. Fanconi anaemia complementation group B presenting as X linked VACTERL with hydrocephalus syndrome. J. Med. Genet. 43: 750-754.
- Nomura, Y., Adachi, N. and Koyama, H. 2007. Human Mus81 and FANCB independently contribute to repair of DNA damage during replication. Genes Cells. 12: 1111-1122.
- 7. García, M.J., Fernández, V., Osorio, A., Barroso, A., Llort, G., Lázaro, C., Blanco, I., Caldes, T., de la Hoya, M., Ramón Y Cajal, T., Alonso, C., Tejada, M.I., San Román, C., Robles-Díaz, L., Urioste, M. and Benítez, J. 2009. Analysis of FANCB and FANCN/PALB2 fanconi anemia genes in BRCA1/2-negative Spanish breast cancer families. Breast Cancer Res. Treat. 113: 545-551.

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.

CHROMOSOMAL LOCATION

Genetic locus: FANCB (human) mapping to Xp22.2.

SOURCE

FANCB (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FANCB of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-131514 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FANCB (C-13) is recommended for detection of FANCB of 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).

Suitable for use as control antibody for FANCB siRNA (h): sc-91099, FANCB shRNA Plasmid (h): sc-91099-SH and FANCB shRNA (h) Lentiviral Particles: sc-91099-V.

Molecular Weight of FANCB: 98 kDa.

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) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**