SANTA CRUZ BIOTECHNOLOGY, INC.

FAAP20 (S-18): sc-245681

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The Power to Question

BACKGROUND

FAAP20 (Fanconi anemia core complex associated protein 20), also known as C1orf86 or FP7162, is a 180 amino acid nuclear protein that contains one UBZ-type zinc finger and is expressed as 6 isoforms produced by alternative splicing. Fanconi anemia is a genetic disease characterized by hematologic defects and cancer, with an inactive FA-BRCA pathway observed in patients. The Fanconi anemia core complex is required for the functional integrity of the FA-BRCA pathway which regulates DNA repair. FAAP20 interacts with FANCA to regulate stability of FANCA and recruits the FA complex to DNA interstrand crosslinks and mediates DNA repair by way of the UBZ (ubiquitin binding zinc finger) domain binding to K63-linked ubiquitin chains. FAAP20 also binds to the monoubiquitinated form of Rev1, and the FA-BRCA pathway controls Rev1-mediated translesion DNA synthesis.

REFERENCES

1. Ali, A.M., et al. 2012. FAAP20: a novel ubiquitin-binding FA nuclear core-complex protein required for functional integrity of the FA-BRCA DNA repair pathway. Blood 119: 3285-3294.
2. Yan, Z., et al. 2012. A ubiquitin-binding protein, FAAP20, links RNF8-mediated ubiquitination to the Fanconi anemia DNA repair network. Mol. Cell 47: 61-75.
3. Kim, H., et al. 2012. Regulation of Rev1 by the Fanconi anemia core complex. Nat. Struct. Mol. Biol. 19: 164-170.
4. Leung, J.W., et al. 2012. Fanconi anemia (FA) binding protein FAAP20 stabilizes FA complementation group A (FANCA) and participates in interstrand cross-link repair. Proc. Natl. Acad. Sci. USA 109: 4491-4496.
5. Huang, Y., et al. 2014. Modularized functions of the Fanconi anemia core complex. Cell Rep. 7: 1849-1857.
6. Wojtaszek, J.L., et al. 2014. Ubiquitin recognition by FAAP20 expands the complex interface beyond the canonical UBZ domain. Nucleic Acids Res. 42: 13997-14005.
7. Toma, A., et al. 2015. Structural basis for ubiquitin recognition by ubiquitin-binding zinc finger of FAAP20. PLoS ONE 10: e0120887.

CHROMOSOMAL LOCATION

Genetic locus: C1orf86 (human) mapping to 1p36.33.

SOURCE

FAAP20 (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FAAP20 of mouse 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-245681 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FAAP20 (S-18) is recommended for detection of FAAP20 of mouse 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 FAAP20 siRNA (m): sc-108776, FAAP20 shRNA Plasmid (m): sc-108776-SH and FAAP20 shRNA (m) Lentiviral Particles: sc-108776-V.

Molecular Weight of FAAP20: 20/31/25/21/19 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) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.