SANTA CRUZ BIOTECHNOLOGY, INC.

FAAP24 (T-15): sc-167770

BACKGROUND

FAAP24 (fanconi anemia-associated protein of 24 kDa), also known as C19orf40, is a 215 amino acid member of the fanconi anemia (FA) core complex. Members of this complex include FANCA, FANCB, FANCC, FANCE, FANCF, FANCG, FANCL/PHF9, FANCM and FAAP100, and are essential for fanconi anemia-associated DNA damage response. FAAP24 plays an important role in this complex by regulating monoubiquitylation of FANCD2 upon DNA damage. Forming a complex with FANCM, FAAP24 and FANCM function independently of the FA core complex, and are required for chromatin association and activation of DNA damage checkpoints. When repressed, FAAP24 induces chromosomal instability and hypersensitivity to DNA cross-linking agents. Localizing to the nucleus, FAAP24 contains a C-terminal region which is distantly related to the DNA-binding domain 2 present in RuvA.

REFERENCES

1. Ciccia, A., et al. 2007. Identification of FAAP24, a Fanconi anemia core complex protein that interacts with FANCM. Mol. Cell 25: 331-343.
2. Niedernhofer, L.J. 2007. The Fanconi anemia signalosome anchor. Mol. Cell 25: 487-490.
3. Ciccia, A., et al. 2008. Structural and functional relationships of the XPF/MUS81 family of proteins. Annu. Rev. Biochem. 77: 259-287.
4. Kim, J.M., et al. 2008. Cell cycle-dependent chromatin loading of the Fanconi anemia core complex by FANCM/FAAP24. Blood 111: 5215-5222.
5. Collis, S.J., et al. 2008. FANCM and FAAP24 function in ATR-mediated checkpoint signaling independently of the Fanconi anemia core complex. Mol. Cell 32: 313-324.
6. Horej í, Z., et al. 2009. FANCM-FAAP24 and HCLK2: roles in ATR signalling and the Fanconi anemia pathway. Cell Cycle 8: 1133-1137.
7. Ali, A.M., et al. 2009. Identification and characterization of mutations in FANCL gene: a second case of Fanconi anemia belonging to FA-L complementation group. Hum. Mutat. 30: E761-E770.
8. Ali, A.M., et al. 2009. FANCM-FAAP24 and FANCJ: FA proteins that metabolize DNA. Mutat. Res. 668: 20-26.
9. Thompson, L.H., et al. 2009. Cellular and molecular consequences of defective Fanconi anemia proteins in replication-coupled DNA repair: mechanistic insights. Mutat. Res. 668: 54-72.

CHROMOSOMAL LOCATION

Genetic locus: C19orf40 (human) mapping to 19q13.11; C230052I12Rik (mouse) mapping to 7 B2.

SOURCE

FAAP24 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FAAP24 of human origin.

STORAGE

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

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-167770 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FAAP24 (T-15) is recommended for detection of FAAP24 of human origin and C230052I12Rik 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); non cross-reactive with FAAP100.

FAAP24 (T-15) is also recommended for detection of FAAP24 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for FAAP24 siRNA (h): sc-97198, C230052I12Rik siRNA (m): sc-141882, FAAP24 shRNA Plasmid (h): sc-97198-SH, C230052I12Rik shRNA Plasmid (m): sc-141882-SH, FAAP24 shRNA (h) Lentiviral Particles: sc-97198-V and C230052I12Rik shRNA (m) Lentiviral Particles: sc-141882-V.

Molecular Weight of FAAP24: 24 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.

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.