SANTA CRUZ BIOTECHNOLOGY, INC.

ABCF1 (C-2): sc-377445

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ABCF1 (ATP-binding cassette sub-family F member 1, TNF-α-stimulated ABC protein) is a 845 amino acid protein encoded by the human gene ABCF1. ABCF1 belongs to the ABC transporter family (EF3 subfamily) and contains two ABC transporter domains. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct sub-families (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). Unlike other members of the superfamily, this protein lacks the transmembrane domains which are characteristic of most ABC transporters. ABCF1 is believed to have a role in mRNA translation due to its interaction with eukaryotic initiation factor 2 (eIF2). It is also associated with ribosomes. ABCF1 is ubiquitously expressed and can be induced with TNF. Upon DNA damage, ABCF1 is phosphorylated by either ATM or ATR.

REFERENCES

1. Richard, M., et al. 1998. ABC50, a novel human ATP-binding cassette protein found in tumor necrosis factor-α-stimulated synoviocytes. Genomics 53: 137-145.
2. Klein, I., et al. 1999. An inventory of the human ABC proteins. Biochim. Biophys. Acta 1461: 237-262.
3. Shichijo, S., et al. 2005. ABCE, a member of ATP-binding cassette transporter gene, encodes peptides capable of inducing HLA-A2-restricted and tumor-reactive cytotoxic T lymphocytes in colon cancer patients. Oncol. Rep. 13: 907-913.
4. Ota, M., et al. 2007. Two critical genes (HLA-DRB1 and ABCF1) in the HLA region are associated with the susceptibility to autoimmune pancreatitis. Immunogenetics 59: 45-52.
5. Chloupková, M., et al. 2007. Expression of 25 human ABC transporters in the yeast *Pichia pastoris* and characterization of the purified ABCC3 ATPase activity. Biochemistry 46: 7992-8003.
6. Heimerl, S., et al. 2007. Mapping ATP-binding cassette transporter gene expression profiles in melanocytes and melanoma cells. Melanoma Res. 17: 265-273.
7. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. Science 316: 1160-1166.
8. Paytubi, S., et al. 2008. The N-terminal region of ABC50 interacts with eukaryotic initiation factor eIF2 and is a target for regulatory phosphorylation by CK2. Biochem. J. 409: 223-231.

CHROMOSOMAL LOCATION

Genetic locus: ABCF1 (human) mapping to 6p21.33; Abcf1 (mouse) mapping to 17 B1.

SOURCE

ABCF1 (C-2) is a mouse monoclonal antibody raised against amino acids 524-658 mapping within an internal region of ABCF1 of human origin.

RESEARCH USE

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

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.

APPLICATIONS

ABCF1 (C-2) is recommended for detection of ABCF1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ABCF1 (C-2) is also recommended for detection of ABCF1 in additional species, including bovine and porcine.

Suitable for use as control antibody for ABCF1 siRNA (h): sc-95478, ABCF1 siRNA (m): sc-140760, ABCF1 shRNA Plasmid (h): sc-95478-SH, ABCF1 shRNA Plasmid (m): sc-140760-SH, ABCF1 shRNA (h) Lentiviral Particles: sc-95478-V and ABCF1 shRNA (m) Lentiviral Particles: sc-140760-V.

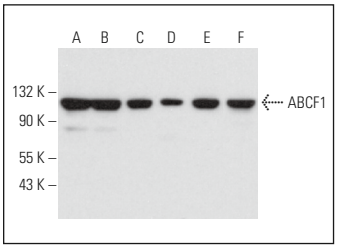
Molecular Weight of ABCF1: 96 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, K-562 whole cell lysate: sc-2203 or EOC 20 whole cell lysate: sc-364187.

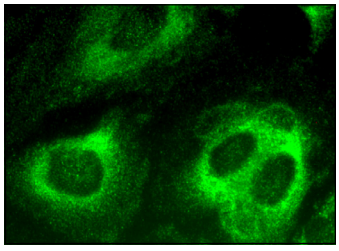
RECOMMENDED SUPPORT REAGENTS

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.

DATA



ABCF1 (C-2): sc-377445. Western blot analysis of ABCF1 expression in K-562 (**A**), HEL 92.1.7 (**B**), A2058 (**C**), EOC 20 (**D**), F9 (**E**) and P19 (**F**) whole cell lysates.



ABCF1 (C-2): sc-377445. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

STORAGE

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