

ABCF1 (ABC5H06): sc-81047

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 subfamilies (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. 2000. An inventory of the human ABC proteins. *Biochim. Biophys. Acta* 1461: 237-262.
3. Shichijo, S., et al. 2005. ABCE1, 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. 2006. 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. Paytubi, S., et al. 2007. 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.
8. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.

CHROMOSOMAL LOCATION

Genetic locus: ABCF1 (human) mapping to 6p21.33.

SOURCE

ABCF1 (ABC5H06) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of ABCF1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

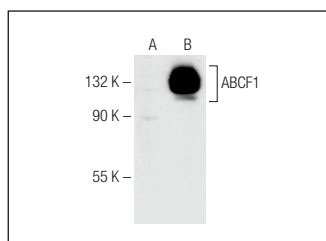
ABCF1 (ABC5H06) is recommended for detection of ABCF1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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

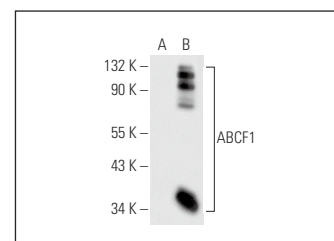
Molecular Weight of ABCF1: 96 kDa.

Positive Controls: ABCF1 (h): 293T Lysate: sc-171396, HeLa cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

DATA



ABCF1 (ABC5H06): sc-81047. Western blot analysis of ABCF1 expression in non-transfected: sc-117752 (A) and human ABCF1 transfected: sc-171396 (B) 293T whole cell lysates.



ABCF1 (ABC5H06): sc-81047. Western blot analysis of ABCF1 expression in non-transfected: sc-117752 (A) and mouse ABCF1 transfected: sc-118159 (B) 293T whole cell lysates.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PROTOCOLS

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