

Che-1 (AATF2B6): sc-81225

BACKGROUND

Che-1, also known as apoptosis-antagonizing transcription factor (AATF), is a widely expressed nuclear protein that belongs to the AATF family. Hyperphosphorylated during the G₁/S phase transition, Che-1 may function as a general inhibitor of the histone deacetylase HDAC1. Che-1 binding to the pocket region of Rb may displace HDAC1 from Rb/E2F complexes, leading to activation of E2F target genes and cell cycle progression. Displacement of HDAC1 from Sp1 bound to the p21 promoter leads to increased expression of Che-1. It also antagonizes PAR4 (prostate apoptosis response 4) mediated induction of aberrant amyloid peptide production in Alzheimer's disease (AD), also known as presenile and senile dementia. PAR4 is a leucine zipper protein that is pro-apoptotic and associated with neuronal degeneration in AD. Che-1 interaction with PAR4 suggests that it might directly or indirectly participate in regulation of PAR4 activity. Che-1 also co-localizes with PAR4 in both cytoplasmic and nuclear compartments, and interacts directly and selectively with PAR4 via the leucine zipper domain in neural cells.

REFERENCES

- Lindfors, K., Halttunen, T., Huotari, P., Nupponen, N., Vihinen, M., Visakorpi, T., Mäki, M. and Kainulainen, H. 2000. Identification of novel transcription factor-like gene from human intestinal cells. *Biochem. Biophys. Res. Commun.* 276: 660-666.
- Di Padova, M., Bruno, T., De Nicola, F., Iezzi, S., D'Angelo, C., Gallo, R., Nicosia, D., Corbi, N., Biroccio, A., Floridi, A., Passananti, C. and Fanciulli, M. 2003. Che-1 arrests human colon carcinoma cell proliferation by displacing HDAC1 from the p21^{WAF1/CIP1} promoter. *J. Biol. Chem.* 278: 36496-36504.
- Xie, J. and Guo, Q. 2004. AATF protects neural cells against oxidative damage induced by amyloid β -peptide. *Neurobiol. Dis.* 16: 150-157.
- Guo, Q. and Xie, J. 2004. AATF inhibits aberrant production of amyloid β peptide 1-42 by interacting directly with PAR-4. *J. Biol. Chem.* 279: 4596-4603.
- Burgdorf, S., Leister, P. and Scheidtmann, K.H. 2004. TSG101 interacts with apoptosis-antagonizing transcription factor and enhances androgen receptor-mediated transcription by promoting its monoubiquitination. *J. Biol. Chem.* 279: 17524-17534.
- Nousiainen, M., Silljé, H.H., Sauer, G., Nigg, E.A. and Körner, R. 2006. Phosphoproteome analysis of the human mitotic spindle. *Proc. Natl. Acad. Sci. USA* 103: 5391-5396.
- Kaul, D. and Mehrotra, A. 2007. Functional characterization of AATF transcriptome in human leukemic cells. *Mol. Cell. Biochem.* 297: 215-220.

CHROMOSOMAL LOCATION

Genetic locus: AATF (human) mapping to 17q12.

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.

SOURCE

Che-1 (AATF2B6) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the N-terminus of Che-1 of human origin.

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

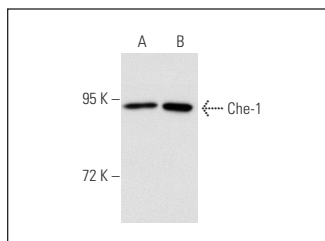
Che-1 (AATF2B6) is recommended for detection of Che-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Che-1 siRNA (h): sc-72888, Che-1 shRNA Plasmid (h): sc-72888-SH and Che-1 shRNA (h) Lentiviral Particles: sc-72888-V.

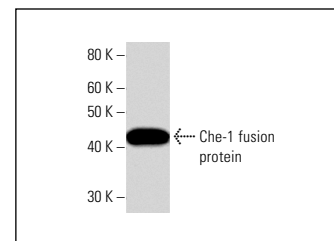
Molecular Weight of Che-1: 63 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

DATA



Che-1 (AATF2B6): sc-81225. Western blot analysis of Che-1 expression in non-transfected: sc-117752 (A) and mouse Che-1 transfected: sc-125132 (B) 293T whole cell lysates.



Che-1 (AATF2B6): sc-81225. Western Blot analysis of human recombinant Che-1 fusion protein.

SELECT PRODUCT CITATIONS

- Liu, X., Cai, S., Zhang, C., Liu, Z., Luo, J., Xing, B. and Du, X. 2018. Deacetylation of NAT10 by SIRT1 promotes the transition from rRNA biogenesis to autophagy upon energy stress. *Nucleic Acids Res.* 46: 9601-9616.
- Benakanakere, M.R., Zhao, J., Finoti, L., Schattner, R., Odabas-Yigit, M. and Kinane, D.F. 2019. MicroRNA-663 antagonizes apoptosis antagonizing transcription factor to induce apoptosis in epithelial cells. *Apoptosis* 24: 108-118.

RESEARCH USE

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