

# Che-1 (Y-25): sc-133455

## 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 G<sub>1</sub>/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<sup>WAF1/CIP1</sup> promoter. *J. Biol. Chem.* 278: 36496-36504.
- Guo, Q. and Xie, J. 2004. AATF inhibits aberrant production of Amyloid  $\beta$  peptide 1-42 by interacting directly with PAR4. *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.
- Xie, J. and Guo, Q. 2004. AATF protects neural cells against oxidative damage induced by Amyloid  $\beta$ -peptide. *Neurobiol. Dis.* 16: 150-157.

## CHROMOSOMAL LOCATION

Genetic locus: AATF (human) mapping to 17q12; Atf (mouse) mapping to 11 C.

## SOURCE

Che-1 (Y-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic Che-1 peptide of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

Che-1 (Y-25) is recommended for detection of Che-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Che-1 siRNA (h): sc-72888, Che-1 siRNA (m): sc-72889, Che-1 shRNA Plasmid (h): sc-72888-SH, Che-1 shRNA Plasmid (m): sc-72889-SH, Che-1 shRNA (h) Lentiviral Particles: sc-72888-V and Che-1 shRNA (m) Lentiviral Particles: sc-72889-V.

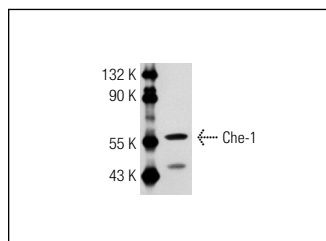
Molecular Weight of Che-1: 63 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

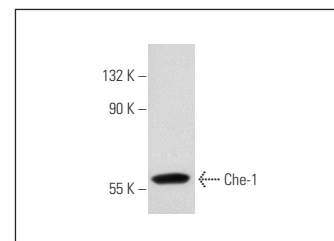
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



Che-1 (Y-25): sc-133455. Western blot analysis of Che-1 expression in Hep G2 whole cell lysate.



Che-1 (Y-25): sc-133455. Western blot analysis of Che-1 expression in Hep G2 whole cell lysate.

## 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.

**MONOS**  
Satisfaction  
Guaranteed

Try **Che-1 (AATF2B6): sc-81225**, our highly recommended monoclonal alternative to Che-1 (Y-25).