

AHA-1 (N-14): sc-33058

BACKGROUND

AHA-1 stimulates the inherent ATPase activity of yeast and human HSP 90 and interacts with the cytoplasmic tail of vesicular stomatitis virus glycoprotein. AHA-1 regulates HSP 90 by influencing the conformational state of the "ATP lid" and consequent N-terminal dimerization. It is crucial for cell viability under non-optimal growth conditions when HSP 90 levels are limiting. AHA-1 is a cytosolic protein and may transiently interact with the endoplasmic reticulum. It can have an affect on one step in the endoplasmic to Golgi trafficking. AHA-1 is expressed in numerous tissues, including brain, heart, skeletal muscle and kidney, and at lower levels in liver and placenta. It is induced by heat shock and treatment with the HSP 90 inhibitor 17-demethoxygeldanamycin.

REFERENCES

1. Zhang, Q.H., et al. 2000. Cloning and functional analysis of cDNAs with open reading frames for 300 previously undefined genes expressed in CD34⁺ hematopoietic stem/progenitor cells. *Genome Res.* 10: 1546-1560.
2. Hu, R.M., et al. 2000. Gene expression profiling in the human hypothalamus-pituitary-adrenal axis and full-length cDNA cloning. *Proc. Natl. Acad. Sci. USA* 97: 9543-9548.
3. Sevier, C.S., et al. 2001. p38: a novel protein that associates with the vesicular stomatitis virus glycoprotein. *Biochem. Biophys. Res. Commun.* 287: 574-582.
4. Panaretou, B., et al. 2002. Activation of the ATPase activity of HSP 90 by the stress-regulated cochaperone AHA-1. *Mol. Cell* 10: 1307-1318.
5. Lotz, G.P., et al. 2003. AHA-1 binds to the middle domain of HSP 90, contributes to client protein activation, and stimulates the ATPase activity of the molecular chaperone. *J. Biol. Chem.* 278: 17228-17235.

CHROMOSOMAL LOCATION

Genetic locus: AHA1 (human) mapping to 14q24.3; Aha1 (mouse) mapping to 12 D2.

SOURCE

AHA-1 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of AHA-1 of human origin.

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-33058 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

AHA-1 (N-14) is recommended for detection of AHA-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

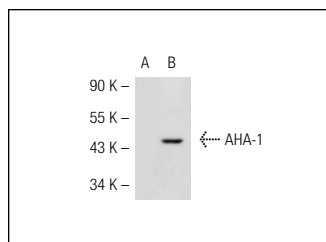
AHA-1 (N-14) is also recommended for detection of AHA-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for AHA-1 siRNA (h): sc-44863, AHA-1 siRNA (m): sc-44864, AHA-1 shRNA Plasmid (h): sc-44863-SH, AHA-1 shRNA Plasmid (m): sc-44864-SH, AHA-1 shRNA (h) Lentiviral Particles: sc-44863-V and AHA-1 shRNA (m) Lentiviral Particles: sc-44864-V.

Molecular Weight of AHA-1: 38 kDa.

Positive Controls: AHA-1 (m): 293T Lysate: sc-118276, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

DATA



AHA-1 (N-14): sc-33058. Western blot analysis of AHA-1 expression in non-transfected: sc-117752 (A) and mouse AHA-1 transfected: sc-118276 (B) 293T whole cell lysates.

PROTOCOLS

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Try **AHA-1 (F-7): sc-166610** or **AHA-1 (E-1): sc-166065**, our highly recommended monoclonal alternatives to AHA-1 (N-14).