SANTA CRUZ BIOTECHNOLOGY, INC.

AHA-1 (C-14): sc-33060



BACKGROUND

AHA-1 stimulates the inherent ATPase activity of yeast and human HSP 90 and interacts with the cytoplasmic tail of vesticular 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 hypothalamuspituitary-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: AHSA1 (human) mapping to 14q24.3; Ahsa1 (mouse) mapping to 12 D2.

SOURCE

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

PRODUCT

Each vial contains 200 µg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33060 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 (C-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), 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 (C-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: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or KNRK whole cell lysate: sc-2214.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

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