



HAH1 (E-15): sc-33478

BACKGROUND

Delivery of copper to a specific P-type ATPase in the Golgi apparatus (Ccc2 in yeast, ATP7A and ATP7B in humans) is an important step in copper homeostasis that is accomplished by a small copper chaperone protein. HAH1 (also designated ATOX1), a metal transport protein that belongs to the ATX1 family, is involved in cellular antioxidant defense and can bind and deliver cytosolic copper to the copper ATPase proteins. Both HAH1 (the human homolog of Atx1) and Atx1 preferentially interact with domains 2 and 4 of ATP7B. Atx1 also interacts with both Ccc2 domains.

REFERENCES

1. Klomp, L.W., et al. 1997. Identification and functional expression of HAH1, a novel human gene involved in copper homeostasis. *J. Biol. Chem.* 272: 9221-9226.
2. Harrison, M.D., et al. 2000. Intracellular copper routing: the role of copper chaperones. *Trends. Biochem. Sci.* 25: 29-32.
3. Boultonwood, J., et al. 2000. Physical mapping of the human ATX1 homologue (HAH1) to the critical region of the 5q- syndrome within 5q32, and immediately adjacent to the SPARC gene. *Hum. Genet.* 106: 127-129.
4. van Dongen, E.M., et al. 2004. Copper-dependent protein-protein interactions studied by yeast two-hybrid analysis. *Biochem. Biophys. Res. Commun.* 323: 789-795.
5. Anastassopoulou, I., et al. 2004. Solution structure of the apo and copper(I)-loaded human metallochaperone HAH1. *Biochemistry* 43: 13046-13053.

CHROMOSOMAL LOCATION

Genetic locus: ATOX1 (human) mapping to 5q32; Atox1 (mouse) mapping to 11 B1.3.

SOURCE

HAH1 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HAH1 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-33478 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.

PROTOCOLS

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

APPLICATIONS

HAH1 (E-15) is recommended for detection of HAH1 of human and, to a lesser extent, mouse and rat 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).

Suitable for use as control antibody for HAH1 siRNA (h): sc-45252.

Molecular Weight of HAH1: 8 kDa.

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.