

HHAT (G-15): sc-164585

BACKGROUND

HHAT (hedgehog acyltransferase), also known as MART2, SKI1, SIT or Skn, is a 493 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum and belongs to the membrane-bound acyltransferase family. Expressed ubiquitously, HHAT functions to catalyze the N-terminal palmitoylation of SSH (slingshot homolog), an event that is required for SHH signaling pathways. HHAT is expressed in cancer cell lines, suggesting a role for HHAT in tumorigenesis. The gene encoding HHAT maps to human chromosome 1 and is expressed as four alternatively spliced isoforms. Chromosome 1 is the largest human chromosome, spanning about 260 million base pairs and making up 8% of the human genome. Several disorders, including Stickler syndrome, Parkinsons disease, Gaucher disease, malignant melanoma and Usher syndrome, are caused by defects in genes that localize to chromosome 1.

REFERENCES

1. Kawakami, Y., Wang, X., Shofuda, T., Sumimoto, H., Tupesis, J., Fitzgerald, E. and Rosenberg, S. 2001. Isolation of a new melanoma antigen, MART-2, containing a mutated epitope recognized by autologous tumor-infiltrating T lymphocytes. *J. Immunol.* 166: 2871-2877.
2. Chamoun, Z., Mann, R.K., Nellen, D., von Kessler, D.P., Bellotto, M., Beachy, P.A. and Basler, K. 2001. Skinny hedgehog, an acyltransferase required for palmitoylation and activity of the hedgehog signal. *Science* 293: 2080-2084.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605743. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Katoh, Y. and Katoh, M. 2005. Hedgehog signaling pathway and gastric cancer. *Cancer Biol. Ther.* 4: 1050-1054.
5. Bergeron, E., Vincent, M.J. and Nichol, S.T. 2007. Crimean-Congo hemorrhagic fever virus glycoprotein processing by the endoprotease SKI-1/S1P is critical for virus infectivity. *J. Virol.* 81: 13271-13276.
6. Buglino, J.A. and Resh, M.D. 2008. HHAT is a palmitoylacyltransferase with specificity for N-palmitoylation of sonic hedgehog. *J. Biol. Chem.* 283: 22076-22088.

CHROMOSOMAL LOCATION

Genetic locus: HHAT (human) mapping to 1q32.2; Hhat (mouse) mapping to 1 H6.

SOURCE

HHAT (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HHAT of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

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-164585 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HHAT (G-15) is recommended for detection of HHAT 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).

HHAT (G-15) is also recommended for detection of HHAT in additional species, including equine.

Suitable for use as control antibody for HHAT siRNA (h): sc-88184, HHAT siRNA (m): sc-145953, HHAT shRNA Plasmid (h): sc-88184-SH, HHAT shRNA Plasmid (m): sc-145953-SH, HHAT shRNA (h) Lentiviral Particles: sc-88184-V and HHAT shRNA (m) Lentiviral Particles: sc-145953-V.

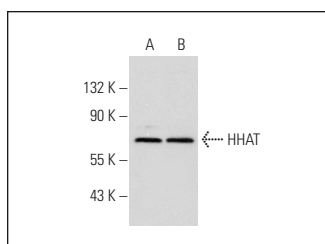
Molecular Weight of HHAT: 57 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



HHAT (G-15): sc-164585. Western blot analysis of HHAT expression in K-562 (A) and HeLa (B) whole cell lysates.

RESEARCH USE

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