SANTA CRUZ BIOTECHNOLOGY, INC.

HACL1 (G-12): sc-102586

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HACL1 (2-hydroxyacyl-CoA lyase 1) is also known as HPCL or 2-HPCL (2-hydroxyphytanoyl-CoA lyase) and is a 578 amino acid protein. HACL1 is abundantly expressed in liver, and is also expressed in kidney, heart and skeletal muscle, where it is localized to peroxisomes. HACL1 functions in lipid metabolism as well as fatty acid metabolism and is able to form homotetramers. Phytol, a breakdown product of chlorophyll, is converted into phytanic acid which undergoes α-oxidation. Through a series of reactions during α-oxidation, phytanic acid is converted into 2-hydroxyphytanoyl-CoA which reacts with HACL1 to yield pristanal and formyl-CoA. The α-oxidation of fatty acids by HACL1, including 3-methyl-branched fatty acids and 2-hydroxylated straight chain fatty acids, promotes carbon-carbon cleavage resulting in a reaction that forms formyl-CoA and a 2-methyl-branched fatty aldehyde. HACL1 is a member of the TPP (thiamine pyrophosphate) enzyme family and TPP is thought to be a cofactor of HACL1 during α-oxidation. Thiamine depletion, present in patients with severe malnutrition, chronic alcoholism and AIDS, can lead to Wernicke-Korsakoff syndrome and affects α-oxidation by lowering the level and activity of HACL1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: HACL1 (human) mapping to 3p25.1; Hacl1 (mouse) mapping to 14 B.

SOURCE

HACL1 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HACL1 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-102586 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HACL1 (G-12) is recommended for detection of HACL1 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).

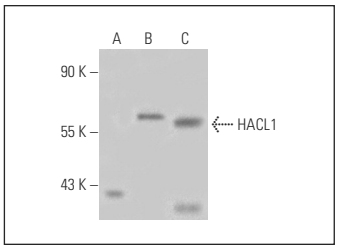
HACL1 (G-12) is also recommended for detection of HACL1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for HACL1 siRNA (h): sc-78507, HACL1 siRNA (m): sc-145890, HACL1 shRNA Plasmid (h): sc-78507-SH, HACL1 shRNA Plasmid (m): sc-145890-SH, HACL1 shRNA (h) Lentiviral Particles: sc-78507-V and HACL1 shRNA (m) Lentiviral Particles: sc-145890-V.

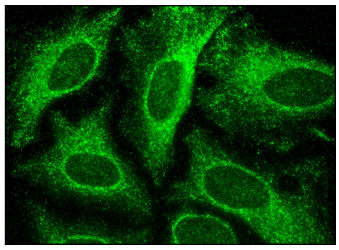
Molecular Weight of HACL1: 63 kDa.

Positive Controls: HACL1 (m): 293T Lysate: sc-120701 or mouse liver extract: sc-2256.

DATA



HACL1 (G-12): sc-102586. Western blot analysis of HACL1 expression in non-transfected 293T: sc-117752 (**A**), human HACL1 transfected 293T: sc-120701 (**B**) whole cell lysates and mouse liver (**C**) tissue extract.



HACL1 (G-12): sc-102586. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.