

ILVBL (T-14): sc-168185

BACKGROUND

ILVBL (ilvB (bacterial acetolactate synthase) like), also known as AHAS (acetolactate synthase-like protein), 209L8 or ILV2H, is a 632 amino acid single-pass membrane protein that belongs to the TPP enzyme family. Expressed in the majority of tissues, ILVBL has the highest level of expression in heart, pancreas and placenta. ILVBL is highly homologous to several bacterial enzymes, including the B isozyme of the large catalytic subunit of *E. coli* acetohydroxy acid synthase (AHAS) and the oxalyl-coA decarboxylase of *O. formigenes*, that utilize thiamine pyrophosphate as a cofactor. ILVBL binds one magnesium ion and one thiamine pyrophosphate per subunit, and may catalyze the initial step in branched-chain amino acid biosynthesis. The gene encoding ILVBL maps to human chromosome 19p13.12 and mouse chromosome 10 C1.

REFERENCES

- Joutel, A., et al. 1996. A human homolog of bacterial acetolactate synthase genes maps within the CADASIL critical region. *Genomics* 38: 192-198.
- Mitra, A. and Sarma, S.P. 2008. *Escherichia coli* ilvN interacts with the FAD binding domain of ilvB and activates the AHAS I enzyme. *Biochemistry* 47: 1518-1531.
- Vyazmensky, M., et al. 2009. Interactions between large and small subunits of different acetohydroxyacid synthase isozymes of *Escherichia coli*. *Biochemistry* 48: 8731-8737.
- Pham, N.C., et al. 2010. Characterization of acetohydroxyacid synthase I from *Escherichia coli* K-12 and identification of its inhibitors. *Biosci. Biotechnol. Biochem.* 74: 2281-2286.
- Lopatovskaia, K.V., et al. 2010. Attenuation regulation of amino acid and amino acyl-tRNA biosynthetic operons in bacteria: comparative genomics analysis. *Mol. Biol.* 44: 140-151.
- Wang, J., et al. 2011. Chemical synthesis, *in vitro* acetohydroxyacid synthase (AHAS) inhibition, herbicidal activity, and computational studies of isatin derivatives. *J. Agric. Food Chem.* 59: 9892-9900.

CHROMOSOMAL LOCATION

Genetic locus: ILVBL (human) mapping to 19p13.12; Ilvbl (mouse) mapping to 10 C1.

SOURCE

ILVBL (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ILVBL 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-168185 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

ILVBL (T-14) is recommended for detection of ILVBL 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).

ILVBL (T-14) is also recommended for detection of ILVBL in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ILVBL siRNA (h): sc-97368, ILVBL siRNA (m): sc-146224, ILVBL shRNA Plasmid (h): sc-97368-SH, ILVBL shRNA Plasmid (m): sc-146224-SH, ILVBL shRNA (h) Lentiviral Particles: sc-97368-V and ILVBL shRNA (m) Lentiviral Particles: sc-146224-V.

Molecular Weight of ILVBL: 68 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.

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.