

TMLH (E-12): sc-162335

BACKGROUND

Carnitine is a quaternary ammonium compound that is required for fatty acid transport into the mitochondria. This step is necessary to utilize fatty acids in β -oxidation to obtain usable energy for the citric acid cycle. TMLH (trimethyllysine hydroxylase), also known as ϵ -trimethyllysine 2-oxoglutarate dioxygenase and TML- α -ketoglutarate dioxygenase, is a 421 amino acid mitochondrial matrix protein that converts trimethyllysine (TML) into hydroxytrimethyllysine (HTML), the first of 4 steps in carnitine biosynthesis. Expressed in both fetal and adult human tissue, there are two isoforms of TMLH, designated TMLHa and TMLHb, that are produced as a result of alternative splicing events. Interestingly, TMLHb negatively affect TMLH activity, suggesting that it may act as a crucial physiological negative regulator of TMLH.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TMLHE (human) mapping to Xq28; Tmlhe (mouse) mapping to X.

SOURCE

TMLH (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TMLH of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162335 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMLH (E-12) is recommended for detection of TMLH 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).

TMLH (E-12) is also recommended for detection of TMLH in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TMLH siRNA (h): sc-91155, TMLH shRNA Plasmid (h): sc-91155-SH and TMLH shRNA (h) Lentiviral Particles: sc-91155-V.

Molecular Weight of TMLH precursor: 48 kDa.

Molecular Weight of mature TMLH: 43 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.

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.