

LCTL (Y-12): sc-137559

BACKGROUND

LCTL (lactase-like protein), also known as KLPH (klotho/lactase-phlorizin hydrolase-related protein) is a 567 amino acid protein belonging to the glycosyl hydrolase 1 family and the klotho subfamily. LCTL is a single-pass membrane protein that consists of an N-terminal signal sequence, glycosidase domain, transmembrane region and short cytoplasmic tail. Unlike Klotho and β Klotho, LCTL contains only a single β -glycosidase-like domain in the extracellular region. LCTL also may be inactive as a glycosidase because it lacks the essential active site Glu at position 201. Localized to the endoplasmic reticulum membrane, LCTL is highly and selectively expressed in brown adipose tissue and eye and may function as an additional coreceptor for FGF-19.

REFERENCES

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3. Kurosu, H. and Kuro-o, M. 2008. The Klotho gene family and the endocrine fibroblast growth factors. *Curr. Opin. Nephrol. Hypertens.* 17: 368-372.
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5. Kuro-o, M. 2008. Endocrine FGFs and Klothos: emerging concepts. *Trends Endocrinol. Metab.* 19: 239-245.
6. Kurosu, H. and Kuro-o, M. 2009. The Klotho gene family as a regulator of endocrine fibroblast growth factors. *Mol. Cell. Endocrinol.* 299: 72-78.

CHROMOSOMAL LOCATION

Genetic locus: LCTL (human) mapping to 15q22.31; Lctl (mouse) mapping to 9 C.

SOURCE

LCTL (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of LCTL 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-137559 P, (100 μ g 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

LCTL (Y-12) is recommended for detection of LCTL of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

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

Suitable for use as control antibody for LCTL siRNA (h): sc-89995, LCTL siRNA (m): sc-146689, LCTL shRNA Plasmid (h): sc-89995-SH, LCTL shRNA Plasmid (m): sc-146689-SH, LCTL shRNA (h) Lentiviral Particles: sc-89995-V and LCTL shRNA (m) Lentiviral Particles: sc-146689-V.

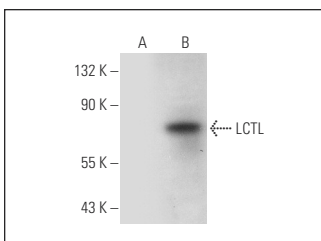
Molecular Weight of LCTL: 65 kDa.

Positive Controls: LCTL (h): 293T Lysate: sc-129000.

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



LCTL (Y-12): sc-137559. Western blot analysis of LCTL expression in non-transfected: sc-117752 (A) and human LCTL transfected: sc-129000 (B) 293T whole cell lysates.

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.