

LMBR1 (D-12): sc-160491

BACKGROUND

LMBR1 (limb region 1), also known as TPT, ACHP, PPD2 or DIF14, is a 490 amino acid multi-pass membrane protein that is widely expressed with strongest expression in heart and pancreas. Belonging to the LIMR family, LMBR1 shares 95% sequence identity with the mouse protein and may play crucial role in the evolution of limb and skeletal system. LMBR1 is critical for expression of sonic hedgehog (Shh) in the developing posterior limb bud mesenchyme. Mutations in the gene encoding LMBR1 is the cause of several rare conditions such as acheiropody (ACHP) and syndactyly type 4 (SDYT4). ACHP is an autosomal recessive inherited disorder characterized by bilateral congenital amputations of the hands and feet. SDYT4, an autosomal dominant trait, is a very rare congenital distal limb malformation characterized by complete bilateral syndactyly, which involves all five digits. LMBR1 exists as three alternatively spliced isoforms.

REFERENCES

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- Sagai, T., et al. 2005. Elimination of a long-range *cis*-regulatory module causes complete loss of limb-specific Shh expression and truncation of the mouse limb. *Development* 132: 797-803.
- Gurnett, C.A., et al. 2007. Two novel point mutations in the long-range SHH enhancer in three families with triphalangeal thumb and preaxial polydactyly. *Am. J. Med. Genet. A* 143: 27-32.
- Sato, D., et al. 2007. A syndactyly type IV locus maps to 7q36. *J. Hum. Genet.* 52: 561-564.
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CHROMOSOMAL LOCATION

Genetic locus: LMBR1 (human) mapping to 7q36.3; *Lmbr1* (mouse) mapping to 5 B1.

SOURCE

LMBR1 (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of LMBR1 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-160491 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LMBR1 (D-12) is recommended for detection of LMBR1 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); non cross-reactive with LMBR1L.

LMBR1 (D-12) is also recommended for detection of LMBR1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LMBR1 siRNA (h): sc-89636, LMBR1 siRNA (m): sc-146761, LMBR1 shRNA Plasmid (h): sc-89636-SH, LMBR1 shRNA Plasmid (m): sc-146761-SH, LMBR1 shRNA (h) Lentiviral Particles: sc-89636-V and LMBR1 shRNA (m) Lentiviral Particles: sc-146761-V.

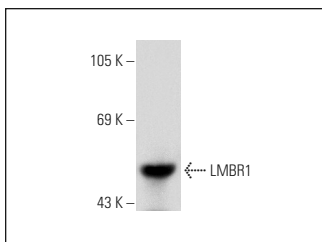
Molecular Weight of LMBR1: 55 kDa.

Positive Controls: mouse pancreas extract: sc-364244, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

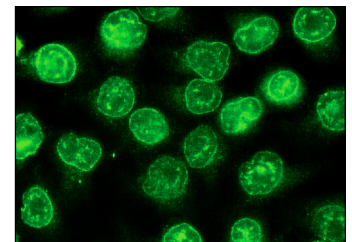
RECOMMENDED SECONDARY REAGENTS

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



LMBR1 (D-12): sc-160491. Western blot analysis of LMBR1 expression in mouse pancreas tissue extract.



LMBR1 (D-12): sc-160491. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear staining.

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.