SANTA CRUZ BIOTECHNOLOGY, INC.

LYPD1 (FL-141): sc-135296



BACKGROUND

LYPD1 (ly6/PLAUR domain-containing protein 1), also known as LYPDC1 or PHTS (putative HeLa tumor suppressor), is a 141 amino acid protein that contains one UPAR/Ly6 domain. LYPD1 is a cell membrane protein expressed as three isoforms and encoded by a gene mapping to human chromosome 2. As the second largest human chromosome, chromosome 2 makes up approximately 8% of the human genome and contains 237 million bases encoding over 1,400 genes. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome, is related to mutations in the ALMS1 gene. Chromosome 2 contains a probable vestigial second centromere as well as vestigial telomeres, which gives credence to the hypothesis that human chromosome 2 formed as a result of an ancient fusion of two ancestral chromosomes, which are still present in modern day apes.

REFERENCES

- 1. IJdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. Proc. Natl. Acad. Sci. USA 88: 9051-9055.
- 2. Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. Hum. Genet. 89: 247-249.
- 3. Hillier, L.W., et. al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
- Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.
- 5. Yu, D.H., et al. 2006. PHTS, a novel putative tumor suppressor, is involved in the transformation reversion of HeLaHF cells independently of the p53 pathway. Exp. Cell Res. 312: 865-876.
- Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. Dermatology 215: 155-159.
- Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. Hum. Mutat. 28: 1114-1123.
- Rooryck, C., et al. 2010. Array-CGH analysis of a cohort of 86 patients with oculoauriculovertebral spectrum. Am. J. Med. Genet. A 152A: 1984-1989.
- 9. You, Y.H., et al. 2010. Time-series gene expression profiles in AGS cells stimulated with *Helicobacter pylori*. World J. Gastroenterol. 16: 1385-1396.

CHROMOSOMAL LOCATION

Genetic locus: LYPD1 (human) mapping to 2q21.2; Lypd1 (mouse) mapping to 1 E3.

SOURCE

LYPD1 (FL-141) is a rabbit polyclonal antibody raised against amino acids 1-141 representing full length LYPD1 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

LYPD1 (FL-141) is recommended for detection of LYPD1 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).

LYPD1 (FL-141) is also recommended for detection of LYPD1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for LYPD1 siRNA (h): sc-94936, LYPD1 siRNA (m): sc-149174, LYPD1 shRNA Plasmid (h): sc-94936-SH, LYPD1 shRNA Plasmid (m): sc-149174-SH, LYPD1 shRNA (h) Lentiviral Particles: sc-94936-V and LYPD1 shRNA (m) Lentiviral Particles: sc-149174-V.

Molecular Weight of LYPD1 isoforms: 15/16/17 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.