SANTA CRUZ BIOTECHNOLOGY, INC.

LBP-1C (14): sc-135970



BACKGROUND

LBP-1C, also known as TFCP2 (transcription factor CP2), CP2, LSF, SEF or TFCP2C, is a 502 amino acid nuclear protein that belongs to the grh/CP2 family. Expressed ubiquitously with highest expression in spleen, brain, ovary, kidney, liver, thymus, heart and lung, LBP-1C binds to the promotors of several genes, such as those encoding Fibrinogen, Hemoglobin α and the viral HIV-1 protein and, via this interaction, plays a role in transcription. Specifically, LBP-1C functions as part of the stage selector protein (SSP) complex where it binds DNA as a dimer and facilitates the interaction of enhancer elements with target promoters, thereby activating transcription. Defects in the gene encoding LBP-1C may be associated with Alzheimer's disease, depression and Purkinje cell degeneration. LBP-1C is expressed as two isoforms due to alternative splicing events.

REFERENCES

- 1. Swendeman, S.L., et al. 1994. Characterization of the genomic structure, chromosomal location, promoter, and development expression of the α -globin transcription factor CP2. J. Biol. Chem. 269: 11663-11671.
- 2. Cunningham, J.M., et al. 1995. The human transcription factor CP2 (TFCP2), a component of the human γ -globin stage selector protein, maps to chromosome region 12q13 and is within 250 kb of the NF-E2 gene. Genomics 30: 398-399.
- Lambert, J.C., et al. 2000. The transcriptional factor LBP-1c/CP2/LSF gene on chromosome 12 is a genetic determinant of Alzheimer's disease. Hum. Mol. Genet. 9: 2275-2280.
- Taylor, A.E., et al. 2001. Genetic association of an LBP-1C/CP2/LSF gene polymorphism with late onset Alzheimers disease. J. Med. Genet. 38: 232-233.
- Bertram, L., et al. 2005. Further evidence for LBP-1C/CP2/LSF association in Alzheimers disease families. J. Med. Genet. 42: 857-862.
- Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. Cell 125: 801-814.
- Schahab, S., et al. 2006. Association of polymorphism in the transcription factor LBP-1C/CP2/LSF gene with Alzheimers disease and major depression. Dement. Geriatr. Cogn. Disord. 22: 95-98.
- 8. Bosè, F., et al. 2006. Functional interaction of CP2 with GATA-1 in the regulation of erythroid promoters. Mol. Cell. Biol. 26: 3942-3954.

CHROMOSOMAL LOCATION

Genetic locus: TFCP2 (human) mapping to 12q13.12; Tfcp2 (mouse) mapping to 15 F1.

SOURCE

LBP-1C (14) is a mouse monoclonal antibody raised against amino acids 205-414 of LBP-1C of human origin.

PRODUCT

Each vial contains 200 μg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

LBP-1C (14) is recommended for detection of LBP-1C 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

LBP-1C (14) is also recommended for detection of LBP-1C in additional species, including canine.

Suitable for use as control antibody for LBP-1C siRNA (h): sc-96237, LBP-1C siRNA (m): sc-146663, LBP-1C shRNA Plasmid (h): sc-96237-SH, LBP-1C shRNA Plasmid (m): sc-146663-SH, LBP-1C shRNA (h) Lentiviral Particles: sc-96237-V and LBP-1C shRNA (m) Lentiviral Particles: sc-146663-V.

Molecular Weight of LBP-1C: 64 kDa.

Positive Controls: HCT-8 cell lysate: sc-24675, Caco-2 cell lysate: sc-2262 or HL-60 whole cell lysate: sc-2209.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG K BP-HRP: sc-516102 or m-IgG K BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG K BP-FITC: sc-516140 or m-IgG K BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA





LBP-1C (14): sc-135970. Western blot analysis of LBP-1C expression in HCT-8 (**A**), NTERA-2 cl.D1 (**B**), HL-60 (**C**), Caco-2 (**D**) and PC-3 (**E**) whole cell lysates. Detection reagent used: m-lgGk BP-HRP: sc-516102.

LBP-1C (14): sc-135970. Immunofluorescence staining of MDCK cells showing cytoplasmic 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. Not for resale.