SANTA CRUZ BIOTECHNOLOGY, INC.

Lamin B receptor (G-14): sc-160482

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Lamin B receptor, also known as LMN2R or LBR, is a 615 amino acid multi-pass membrane protein that localizes to the membrane of the nuclear envelope and belongs to the ERG4/ERG24 family. Interacting directly with HP1α, Lamin B receptor functions to anchor heterochromatin and lamina to the inner nuclear membrane and may also mediate interactions between Lamin B and chromatin. Posttranslational phosphorylation of Lamin B receptor is thought to determine the cell cycle phase during which Lamin B receptor exerts its regulatory effects. Defects in the gene encoding Lamin B receptor are a cause of Pelger-Huet anomaly (PHA) and hydrops-ectopic calcification-moth-eaten skeletal dysplasia (HEM), known more commonly as Greenberg skeletal dysplasia. While PHA is an autosomal dominant disorder characterized by developmental delay, epilepsy and skeletal abnormalities, Lamin B receptor is an autosomal recessive disorder characterized by fetal hydrops and short-limbed dwarfism.

REFERENCES

1. Duband-Goulet, I., et al. 2000. Inner nuclear membrane protein LBR preferentially interacts with DNA secondary structures and nucleosomal linker. Biochemistry 39: 6483-6488.
2. Hoffmann, K., et al. 2002. Mutations in the gene encoding the Lamin B receptor produce an altered nuclear morphology in granulocytes (Pelger-Huët anomaly). Nat. Genet. 31: 410-414.
3. Best, S., et al. 2003. Lamin B receptor mutations in Pelger-Huët anomaly. Br. J. Haematol. 123: 542-544.
4. Shultz, L.D., et al. 2003. Mutations at the mouse ichthyosis locus are within the Lamin B receptor gene: a single gene model for human Pelger-Huët anomaly. Hum. Mol. Genet. 12: 61-69.
5. Mylonis, I., et al. 2004. Temporal association of Protamine 1 with the inner nuclear membrane protein Lamin B receptor during spermiogenesis. J. Biol. Chem. 279: 11626-11631.
6. Takano, M., et al. 2004. Regulation of binding of Lamin B receptor to chromatin by SR protein kinase and Cdc2 kinase in *Xenopus* egg extracts. J. Biol. Chem. 279: 13265-13271.
7. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 600024. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: LBR (human) mapping to 1q42.12; Lbr (mouse) mapping to 1 H5.

SOURCE

Lamin B receptor (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Lamin B receptor of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160482 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Lamin B receptor (G-14) is recommended for detection of Lamin B receptor 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).

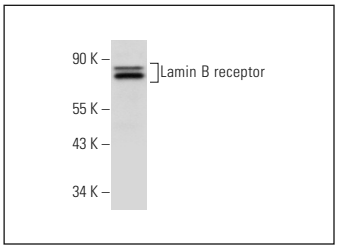
Lamin B receptor (G-14) is also recommended for detection of Lamin B receptor in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Lamin B receptor siRNA (h): sc-88544, Lamin B receptor siRNA (m): sc-146641, Lamin B receptor shRNA Plasmid (h): sc-88544-SH, Lamin B receptor shRNA Plasmid (m): sc-146641-SH, Lamin B receptor shRNA (h) Lentiviral Particles: sc-88544-V and Lamin B receptor shRNA (m) Lentiviral Particles: sc-146641-V.

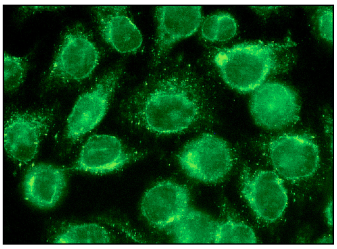
Molecular Weight of Lamin B receptor: 71 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

DATA



Lamin B receptor (G-14): sc-160482. Western blot analysis of Lamin B receptor expression in Jurkat whole cell lysate.



Lamin B receptor (G-14): sc-160482. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear membrane staining.

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.