

CIB2 (H-51): sc-98381

BACKGROUND

CIB2 (calcium and integrin-binding family member 2) is a 187 amino acid protein encoded by the human gene CIB2. CIB2 is a ubiquitously expressed protein that contains three EF-hand domains. CIB2 is closely related to CIB1 (CIB1 has one less EF-hand domain), which is known to bind to Integrin α IIb in platelets and is involved in signal transduction. CIB2 expression is significantly reduced in Laminin α -2 chain deficient muscle, but is unaffected in the mouse model for Duchenne muscular dystrophy. This indicates that CIB2 is likely involved in the pathogenesis of MDC1A, a congenital muscular dystrophy caused by mutations in the gene encoding Laminin α -2 chain. CIB2 also binds to Integrin α 7 and calcium, indicating that CIB2 has various functions in signalling pathways.

REFERENCES

- Cachón-González, M.B., Wang, S.Z., Lynch, A., Ziegler, R., Cheng, S.H. and Cox, T.M. 2006. Effective gene therapy in an authentic model of Tay-Sachs-related diseases. *Proc. Natl. Acad. Sci. USA* 103: 10373-10378.
- Zody, M.C., Garber, M., Sharpe, T., Young, S.K., Rowen, L., O'Neill, K., Whittaker, C.A., Kamal, M., Chang, J.L., Cuomo, C.A., Dewar, K., Fitzgerald, M.G., Kodira, C.D., Madan, A., Qin, S., Yang, X., Abbasi, N., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. *Nature* 440: 671-675.
- Diene, G., Postel-Vinay, A., Pinto, G., Polak, M. and Tauber, M. 2007. The Prader-Willi syndrome. *Ann. Endocrinol.* 68: 129-137.
- Lalande, M. and Calciano, M.A. 2007. Molecular epigenetics of Angelman syndrome. *Cell. Mol. Life Sci.* 64: 947-960.
- Maegawa, G.H., Tropak, M., Buttner, J., Stockley, T., Kok, F., Clarke, J.T. and Mahuran, D.J. 2007. Pyrimethamine as a potential pharmacological chaperone for late-onset forms of GM2 gangliosidosis. *J. Biol. Chem.* 282: 9150-9161.
- Makoff, A.J. and Flomen, R.H. 2007. Detailed analysis of 15q11-q14 sequence corrects errors and gaps in the public access sequence to fully reveal large segmental duplications at breakpoints for Prader-Willi, Angelman, and inv dup(15) syndromes. *Genome Biol.* 8: R114
- Ramirez, F. and Dietz, H.C. 2007. Fibrillin-rich microfibrils: structural determinants of morphogenetic and homeostatic events. *J. Cell. Physiol.* 213: 326-330.
- Hager, M., Mikael, A., Allamand, V. and Dubeej-Hjalt, M. 2007. CIB2 in muscular dystrophy. *Neuromuscul. Disord.* 17: 764-900.

CHROMOSOMAL LOCATION

Genetic locus: CIB2 (human) mapping to 15q25.1; Cib2 (mouse) mapping to 9 A5.3.

SOURCE

CIB2 (H-51) is a rabbit polyclonal antibody raised against amino acids 21-71 mapping within an internal region of CIB2 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.

APPLICATIONS

CIB2 (H-51) is recommended for detection of CIB2 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).

CIB2 (H-51) is also recommended for detection of CIB2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CIB2 siRNA (h): sc-89944, CIB2 siRNA (m): sc-105205, CIB2 shRNA Plasmid (h): sc-89944-SH, CIB2 shRNA Plasmid (m): sc-105205-SH, CIB2 shRNA (h) Lentiviral Particles: sc-89944-V and CIB2 shRNA (m) Lentiviral Particles: sc-105205-V.

Molecular Weight of CIB2: 22 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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.