



p55 (h): 293T Lysate: sc-175135

BACKGROUND

p55 is an extensively palmitoylated erythrocyte membrane protein and a member of the MAGUK family. p55 also resists salt extraction, resulting in a high affinity for the plasma membrane. p55 contains a PDZ/DHR domain, a conserved SH3 domain that appears to suppress tyrosine kinase activity of various oncoproteins, a 39-amino acid motif that binds to cytoskeletal protein 4.1R and a guanylate kinase-like domain. Interaction with glycophorin C (GPC) and 4.1R suggests that p55 may play a role in the dynamic regulation in the erythrocyte membrane. In addition, p55 gene expression *in vivo* may be associated with a CpG island. p55 is constitutively expressed in K-562 erythroleukemia cells during erythropoiesis and undergoes a two-fold amplification after induction.

REFERENCES

1. Ruff, P., Speicher, D.W. and Husain-Chishti, A. 1991. Molecular identification of a major palmitoylated erythrocyte membrane protein containing the Src homology 3 motif. *Proc. Natl. Acad. Sci. USA* 88: 6595-6599.
2. Das, A.K., Kundu, M., Chakrabarti, P. and Basu, J. 1992. Fatty acylation of a 55 kDa membrane protein of human erythrocytes. *Biochem. Biophys. Acta* 1108: 128-132.
3. Marfatia, S.M., Leu, R.A., Branton, D. and Chishti, A.H. 1995. Identification of the protein 4.1 binding interface on glycophorin C and p55, a homologue of the *Drosophila* discs-large tumor suppressor protein. *J. Biol. Chem.* 270: 715-719.
4. Kim, A.C., Metznerberg, A.B., Sahr, K.E., Marfatia, S.M. and Chishti, A.H. 1996. Complete genomic organization of the human erythroid p55 gene (MPP1), a membrane-associated guanylate kinase homologue. *Genomics* 31: 223-229.
5. Nunomura, W., Takakuwa, Y., Parra, M., Conboy, J. and Mohandas, N. 2000. Regulation of protein 4.1R, p55, and glycophorin C ternary complex in human erythrocyte membrane. *J. Biol. Chem.* 275: 24540-24546.

CHROMOSOMAL LOCATION

Genetic locus: MPP1 (human) mapping to Xq28.

PRODUCT

p55 (h): 293T Lysate represents a lysate of human p55 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

p55 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive p55 antibodies.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.