

# p55 (51-B): sc-130381

## 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 SH-3 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 glycoprotein 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 glycoprotein C and p55, a homologue of the *Drosophila* discs-large tumor suppressor protein. *J. Biol. Chem.* 270: 715-719.
4. Kim, A.C., Metzberg, 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 glycoprotein C ternary complex in human erythrocyte membrane. *J. Biol. Chem.* 275: 24540-24546.

## CHROMOSOMAL LOCATION

Genetic locus: MPP1 (human) mapping to Xq28.

## SOURCE

p55 (51-B) is a mouse monoclonal antibody raised against recombinant p55 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

p55 (51-B) is recommended for detection of p55 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for p55 siRNA (h2): sc-156153, p55 shRNA Plasmid (h2): sc-156153-SH and p55 shRNA (h2) Lentiviral Particles: sc-156153-V.

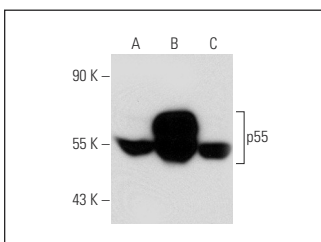
Molecular Weight of p55: 55 kDa.

Positive Controls: p55 (h): 293T Lysate: sc-175135 or K-562 whole cell lysate: sc-2203.

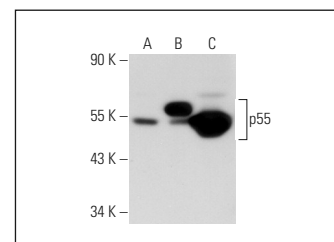
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

## DATA



p55 (51-B): sc-130381. Western blot analysis of p55 expression in non-transfected 293T: sc-117752 (A), human p55 transfected 293T: sc-175135 (B) and K-562 (C) whole cell lysates.



p55 (51-B): sc-130381. Western blot analysis of p55 expression in non-transfected 293T: sc-117752 (A), human p55 transfected 293T: sc-175147 (B) and K-562 (C) whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.