

# p55 (T-19): sc-13603

## 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 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 K562 erythroleukemia cells during erythropoiesis and undergoes a 2-fold amplification after induction.

## REFERENCES

1. Ruff, P., et al. 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., et al. 1992. Fatty acylation of a 55 kDa membrane protein of human erythrocytes. *Biochem. Biophys. Acta* 1108: 128-132.
3. Marfatia, S.M., et al. 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., et al. 1996. Complete genomic organization of the human erythroid p55 gene (MPP1), a membrane-associated guanylate kinase homologue. *Genomics* 31: 223-229.
5. Nunomura, W., et al. 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 (mouse) mapping to X A7.3.

## SOURCE

p55 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of p55 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13603 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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) or our catalog for detailed protocols and support products.

## APPLICATIONS

p55 (T-19) is recommended for detection of erythrocyte membrane protein p55 of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for p55 siRNA (m): sc-42009, p55 shRNA Plasmid (m): sc-42009-SH and p55 shRNA (m) Lentiviral Particles: sc-42009-V.

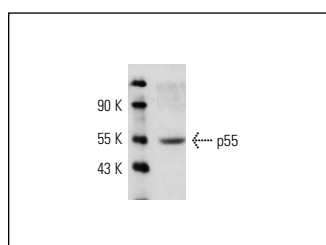
Molecular Weight of p55: 55 kDa.

Positive Controls: mouse spleen extract: sc-2391.

## RECOMMENDED SECONDARY REAGENT

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



p55 (T-19): sc-13603. Western blot analysis of p55 expression in mouse spleen tissue extract.

## SELECT PRODUCT CITATIONS

1. Porro, F., et al. 2004. The erythrocyte skeletons of Adducin β deficient mice have altered levels of Tropomyosin, tropomodulin and EcapZ. *FEBS Lett.* 576: 36-40.
2. Mburu, P., et al. 2006. Whirlin complexes with p55 at the stereocilia tip during hair cell development. *Proc. Natl. Acad. Sci. USA* 103: 10973-10978.

## RESEARCH USE

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