

p55 (N-19): sc-13490

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

REFERENCES

- 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.
- Das, A.K., et al. 1992. Fatty acylation of a 55 kDa membrane protein of human erythrocytes. *Biochem. Biophys. Acta* 1108: 128-132.
- Marfatia, S.M., et al. 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.
- 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.
- Nunomura, W., et al. 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 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of p55 of human 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-13490 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 or our catalog for detailed protocols and support products.

APPLICATIONS

p55 (N-19) is recommended for detection of erythrocyte membrane protein p55 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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: K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

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) 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.

SELECT PRODUCT CITATIONS

- Ciana, A., et al. 2011. On the association of lipid rafts to the spectrin skeleton in human erythrocytes. *Biochim. Biophys. Acta* 1808: 183-190.
- Ciana, A., et al. 2013. Freely turning over palmitate in erythrocyte membrane proteins is not responsible for the anchoring of lipid rafts to the spectrin skeleton: a study with bio-orthogonal chemical probes. *Biochim. Biophys. Acta* 1828: 924-931.

RESEARCH USE

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