

HIP-55 (N-17): sc-79973

BACKGROUND

Drebrins (developmentally regulated brain proteins) are cytoplasmic proteins that bind F-actin in the brain and are involved in cell migration, extension of neuronal processes and plasticity of dendrites. HIP-55 (HPK1-interacting protein of 55 kDa), also known as ABP1, SH3P7 or DBNL (Drebrin-like), is a 430 amino acid cytoplasmic protein that belongs to the ABP1 family. HIP-55 binds to F-actin but is not involved in actin polymerization, capping or bundling. In addition to containing an ADF-H domain, HIP-55 also consists of a SH3 domain, which mediates interaction with Shank 2, Shank 3 and PRAM-1. HIP-55 acts as an actin-binding adapter protein and as a common effector of antigen receptor-signaling pathways in leukocytes. As a key component of the immunological synapse, HIP-55 regulates T-cell activation by bridging TCRs and the actin cytoskeleton to gene activation and endocytic processes. HIP-55 is degraded by caspases during apoptosis.

REFERENCES

1. Chen, Y.R., et al. 2001. Caspase-mediated cleavage of actin-binding and SH3-domain-containing proteins Cortactin, HS1, and HIP-55 during apoptosis. *Biochem. Biophys. Res. Commun.* 288: 981-989.
2. Kessels, M.M., et al. 2001. Mammalian Abp1, a signal-responsive F-actin-binding protein, links the Actin cytoskeleton to endocytosis via the GTPase dynamin. *J. Cell Biol.* 153: 351-366.
3. Mise-Omata, S., et al. 2003. Mammalian actin binding protein 1 is essential for endocytosis but not lamellipodia formation: functional analysis by RNA interference. *Biochem. Biophys. Res. Commun.* 301: 704-710.
4. Han, J., et al. 2003. The SH3 domain-containing adaptor HIP-55 mediates c-Jun N-terminal kinase activation in T cell receptor signaling. *J. Biol. Chem.* 278: 52195-52202.
5. Le Bras, S., et al. 2004. Recruitment of the actin-binding protein HIP-55 to the immunological synapse regulates T cell receptor signaling and endocytosis. *J. Biol. Chem.* 279: 15550-15560.

CHROMOSOMAL LOCATION

Genetic locus: DBNL (human) mapping to 7p13; Dbnl (mouse) mapping to 11 A1.

SOURCE

HIP-55 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HIP-55 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-79973 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.

APPLICATIONS

HIP-55 (N-17) is recommended for detection of HIP-55 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HIP-55 (N-17) is also recommended for detection of HIP-55 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HIP-55 siRNA (h): sc-75255, HIP-55 siRNA (m): sc-75256, HIP-55 shRNA Plasmid (h): sc-75255-SH, HIP-55 shRNA Plasmid (m): sc-75256-SH, HIP-55 shRNA (h) Lentiviral Particles: sc-75255-V and HIP-55 shRNA (m) Lentiviral Particles: sc-75256-V.

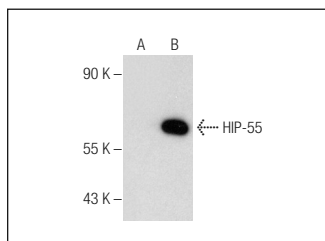
Molecular Weight of HIP-55: 55 kDa.

Positive Controls: HIP-55 (h): 293T Lysate: sc-371066.

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) 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.

DATA



HIP-55 (N-17): sc-79973. Western blot analysis of HIP-55 expression in non-transfected: sc-117752 (A) and human HIP-55 transfected: sc-371066 (B) 293T whole cell lysates.

RESEARCH USE

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

MONOS
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Try **HIP-55 (E-11): sc-398498** or **HIP-55 (F-9): sc-398351**, our highly recommended monoclonal alternatives to HIP-55 (N-17).