SANTA CRUZ BIOTECHNOLOGY, INC.

HIP1 (13): sc-136415

BACKGROUND

Huntington disease is associated with the expansion of a polyglutamine tract, greater than 35 repeats, in the HD gene product huntingtin. HIP1 (huntingtin-interacting protein 1), a membrane-associated protein, binds specifically to the N-terminus of human huntingtin. HIP1 is ubiquitously expressed in different brain regions at low levels, and exhibits nearly identical subcellular fractionation as huntingtin. The huntingtin-HIP1 interaction is restricted to the brain and is inversely correlated to the polyglutamine length in the huntingtin, suggesting that loss of normal huntingtin-HIP1 interaction may compromise the membrane-cytoskeletal integrity in the brain. HIP1 contains an endocytic multidomain protein with a C-terminal Actin-binding domain, a central coiled-coil forming region and an N-terminal ENTH domain. HIP1 may be involved in vesicle trafficking; the structural integrity of HIP1 is crucial for maintenance of normal vesicle size *in vivo*. HIP12 is a non-proapoptotic member of the HIP gene family that is expressed in the brain and shares a similar subcellular distribution pattern with HIP1. However, HIP12 differs from HIP1 in its pattern of expression at both the mRNA and protein level. HIP12 does not directly interact with huntingtin but can interact with HIP1.

REFERENCES

1. Kalchman, M.A., et al. 1997. HIP1, a human homologue of *S. cerevisiae* Sla2p, interacts with membrane-associated huntingtin in the brain. Nat. Genet. 16: 44-53.
2. Wanker, E.E., et al. 1997. HIP1: a huntingtin interacting protein isolated by the yeast two-hybrid system. Hum. Mol. Genet. 6: 487-495.
3. Wedemeyer, N., et al. 1997. Localization of the human HIP1 gene close to the elastin (ELN) locus on 7q11.23. Genomics 46: 313-315.
4. Himmelbauer, H., et al. 1998. IRS-PCR-based genetic mapping of the huntingtin interacting protein gene (HIP1) on mouse chromosome 5. Mamm. Genome 9: 26-31.
5. Chopra, V.S., et al. 2000. HIP12 is a non-proapoptotic member of a gene family including HIP1, an interacting protein with huntingtin. Mamm. Genome 11: 1006-1015.
6. Waelter, S., et al. 2001. The huntingtin interacting protein HIP1 is a clathrin and α-adaptin-binding protein involved in receptor-mediated endocytosis. Hum. Mol. Genet. 10: 1807-1817.

CHROMOSOMAL LOCATION

Genetic locus: HIP1 (human) mapping to 7q11.23; Hip1 (mouse) mapping to 5 G2.

SOURCE

HIP1 (13) is a mouse monoclonal antibody raised against amino acids 228-337 of HIP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HIP1 (13) is recommended for detection of HIP1 of mouse, rat and 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 HIP1 siRNA (h): sc-41982, HIP1 siRNA (m): sc-41983, HIP1 shRNA Plasmid (h): sc-41982-SH, HIP1 shRNA Plasmid (m): sc-41983-SH, HIP1 shRNA (h) Lentiviral Particles: sc-41982-V and HIP1 shRNA (m) Lentiviral Particles: sc-41983-V.

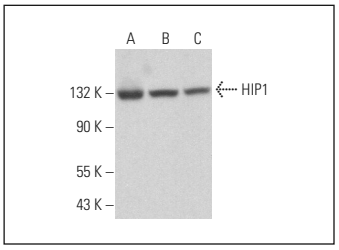
Molecular Weight of HIP1: 116 kDa.

Positive Controls: A-10 cell lysate: sc-3806, A549 cell lysate: sc-2413 or HCT-116 whole cell lysate: sc-364175.

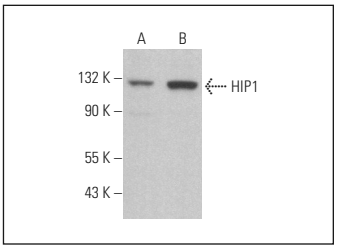
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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



HIP1 (13): sc-136415. Western blot analysis of HIP1 expression in NIH/3T3 (**A**), AT3B-1 (**B**) and A-10 (**C**) whole cell lysates.



HIP1 (13): sc-136415. Western blot analysis of HIP1 expression in HCT-116 (**A**) and A549 (**B**) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. 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.