SANTA CRUZ BIOTECHNOLOGY, INC.

HIP2 (H-6): sc-390339

BACKGROUND

HIP1 (Huntingtin interacting protein 1), a membrane-associated protein, and HIP2 bind specifically to the N-terminus of human Huntingtin. HIP1 and HIP2 are ubiquitously expressed in different brain regions at low levels and exhibit nearly identical subcellular fractionation as Huntingtin. The Huntingtin-HIP1 interaction is inversely correlated to the polyglutamine length in Huntingtin, suggesting that loss of normal Huntingtin-HIP1 interaction may compromise the membrane-cytoskeletal integrity in the brain. Conversely, the Huntingtin-HIP2 interaction is not affected by the polyglutamine length in the Huntingtin protein. However, both HIP1 and HIP2 play an important role in the pathogenesis of Huntington disease (HD).

REFERENCES

1. Sun, H., et al. 1992. Effects of McAbs HIP2, APT4 and HI117 on the human platelet cytoskeleton. Zhongguo Yi Xue Ke Xue Yuan Xue Bao 14: 1-5.
2. Kalchman, M.A., et al. 1996. Huntingtin is ubiquitinated and interacts with a specific ubiquitin-conjugating enzyme. J. Biol. Chem. 271: 19385-19394.
3. Tanno, Y., et al. 1999. Localization of Huntingtin-interacting protein-2 (HIP-2) mRNA in the developing mouse brain. J. Chem. Neuroanat. 17: 99-107.
4. Wang, Y., et al. 2000. YAC/BAC-based physical and transcript mapping around the gracile axonal dystrophy (gad) locus identifies Uchl1, Pmx2b, Atp3a2, and HIP2 genes. Genomics 66: 333-336.
5. Lee, S.J., et al. 2001. E3 ligase activity of RING finger proteins that interact with Hip-2, a human ubiquitin-conjugating enzyme. FEBS Lett. 503: 61-64.
6. Song, S., et al. 2003. Essential role of E2-25K/Hip-2 in mediating amyloid-β neurotoxicity. Mol. Cell 12: 553-563.
7. Wesierska-Gadek, J., et al. 2007. Roscovitine-activated HIP2 kinase induces phosphorylation of wt p53 at Ser-46 in human MCF-7 breast cancer cells. J. Cell. Biochem. 100: 865-874.
8. Metzler, M., et al. 2007. NMDA receptor function and NMDA receptor-dependent phosphorylation of Huntingtin is altered by the endocytic protein HIP1. J. Neurosci. 27: 2298-2308.

CHROMOSOMAL LOCATION

Genetic locus: UBE2K (human) mapping to 4p14; Ube2k (mouse) mapping to 5 C3.1.

SOURCE

HIP2 (H-6) is a mouse monoclonal antibody raised against amino acids 1-100 mapping at the N-terminus of HIP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 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.

APPLICATIONS

HIP2 (H-6) is recommended for detection of HIP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

HIP2 (H-6) is also recommended for detection of HIP2 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for HIP2 siRNA (h): sc-41984, HIP2 siRNA (m): sc-41985, HIP2 shRNA Plasmid (h): sc-41984-SH, HIP2 shRNA Plasmid (m): sc-41985-SH, HIP2 shRNA (h) Lentiviral Particles: sc-41984-V and HIP2 shRNA (m) Lentiviral Particles: sc-41985-V.

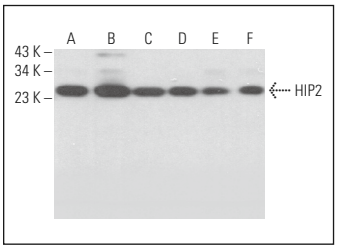
Molecular Weight of HIP2: 22 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, SP2/0 whole cell lysate: sc-364795 or HeLa whole cell lysate: sc-2200.

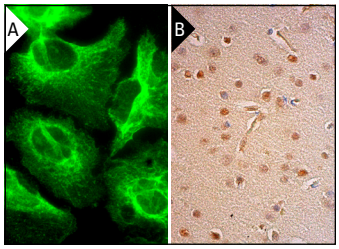
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



HIP2 (H-6): sc-390339. Western blot analysis of HIP2 expression in K-562 (**A**), SP2/0 (**B**), MTE1D (**C**), HeLa (**D**), NCI-H292 (**E**) and c4 (**F**) whole cell lysates.



HIP2 (H-6): sc-390339. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing nuclear staining of neuronal cells, Glial cells and endothelial cells (**B**).

RESEARCH USE

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