

HAP1 (1B6): sc-32257

BACKGROUND

HAP1 (Huntingtin-associated protein 1) binds to Huntingtin. Huntingtin is a protein that contains a polyglutamine region and when the number of glutamine repeats exceeds 35, the gene encodes a version of Huntingtin that leads to Huntington's disease (HD). The ability of HAP1 to bind to Huntingtin is enhanced by an expanded polyglutamine repeat region. HAP1 shows neuronal localization and moves with Huntingtin in nerve fibers. HAP1 is primarily expressed in brain tissue, with greater expression in the olfactory bulb and brain stem. HAP1 in rat has been shown to associate with a number of intracellular organelles. Mouse HAP1 is localized to membrane-bound organelles including large endosomes, tubulovesicular structures and budding vesicles in neurons.

REFERENCES

1. THDCR Group. 1993. A novel gene containing a trinucleotide repeat that is expanded and unstable on Huntington's disease chromosomes. *Cell* 72: 971-983.
2. Li, X.J., et al. 1995. A Huntingtin-associated protein enriched in brain with implications for pathology. *Nature* 378: 398-402.
3. Gusella, J.F., et al. 1996. Huntington's disease. *Cold Spring Harb. Symp. Quant. Biol.* 61: 615-626.
4. Li, X.J., et al. 1996. Huntingtin-associated protein (HAP1): discrete neuronal localization in the brain resemble those of neuronal nitric oxide synthase. *Proc. Natl. Acad. Sci. USA* 93: 4839-4844.
5. Block-Galarza, J., et al. 1997. Fast transport and retrograde movement of Huntingtin and HAP1 in axons. *Neuroreport* 8: 2247-2251.
6. Gutekunst, C.A., et al. 1999. Nuclear and neuropil aggregates in Huntington's disease: relationship to neuropathology. *J. Neurosci.* 19: 2522-2534.
7. Martin, E.J., et al. 1999. Analysis of Huntingtin associated protein 1 in mouse brain and immortalized striatal neurons. *J. Comp. Neurol.* 403: 421-430.

CHROMOSOMAL LOCATION

Genetic locus: HAP1 (human) mapping to 17q21.2; Hap1 (mouse) mapping to 11 D.

SOURCE

HAP1 (1B6) is a mouse monoclonal antibody raised against cDNA residues 290-426 of HAP1 of rat origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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

HAP1 (1B6) is recommended for detection of HAP1 of mouse and human origin and HAP1A and HAP1B of rat origin by Western Blotting (starting dilution 1:500, 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 HAP1 siRNA (h): sc-94188, HAP1 siRNA (m): sc-63300, HAP1 shRNA Plasmid (h): sc-94188-SH, HAP1 shRNA Plasmid (m): sc-63300-SH, HAP1 shRNA (h) Lentiviral Particles: sc-94188-V and HAP1 shRNA (m) Lentiviral Particles: sc-63300-V.

Molecular Weight of HAP1A: 75 kDa.

Molecular Weight of HAP1B: 85 kDa.

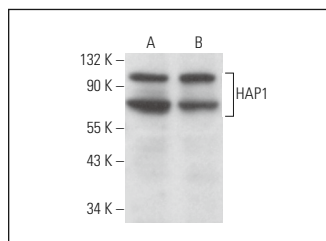
Positive Controls: HAP1 (m): 293T Lysate: sc-125431, mouse cerebellum extract: sc-2403 or mouse brain extract: sc-2253.

RECOMMENDED SUPPORT REAGENTS

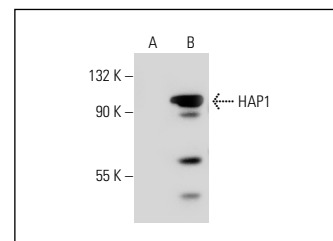
To ensure optimal results, the following support reagents are recommended:

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



HAP1 (1B6): sc-32257. Western blot analysis of HAP1 expression in mouse cerebellum (A) and mouse brain (B) tissue extracts.



HAP1 (1B6): sc-32257. Western blot analysis of HAP1 expression in non-transfected: sc-117752 (A) and mouse HAP1 transfected: sc-125431 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Fujinaga, R., et al. 2011. Intracellular colocalization of HAP1/STBs with steroid hormone receptors and its enhancement by a proteasome inhibitor. *Exp. Cell Res.* 317: 1689-1700.
2. Yuen, E.Y., et al. 2012. Disrupted GABAAR trafficking and synaptic inhibition in a mouse model of Huntington's disease. *Neurobiol. Dis.* 46: 497-502.
3. Li, R., et al. 2020. HAP1 modulates epileptic seizures by regulating GABA_AR function in patients with temporal lobe epilepsy and in the PTZ-induced epileptic model. *Neurochem. Res.* 45: 1997-2008.

RESEARCH USE

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