SANTA CRUZ BIOTECHNOLOGY, INC.

Huntingtin (8A4): sc-47759

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The Power to Question

BACKGROUND

Huntingtin is a protein that contains a polyglutamine region. When the number of glutamine repeats exceeds 35, the gene encodes a version of Huntingtin that leads to Huntington's disease (HD). When the polyglutamine stretch is mutated, Huntingtin acts within the nucleus to induce neurodegeneration by a cell-specific apoptotic mechanism. Loss of Huntingtin activity is unlikely to be the cause of HD, and it has been proposed that the expanded glutamine repeat region may induce an abnormal interaction between the mutant protein and other cellular proteins. Huntingtin interacts with a variety of proteins including HAP1, glyceraldehyde phosphate dehydrogenase (GAPDH), and HIP1.

REFERENCES

1. The Huntington's Disease Collaborative Research Group. 1993. A novel gene containing a trinucleotide repeat that is expanded and unstabe on Huntington's disease chromosomes. Cell 72: 971-983.
2. Ambrose, C.M., et al. 1994. Structure and expression of the Huntington's disease gene: evidence against simple inactivation due to an expanded CAG repeat. Somat. Cell Mol. Genet. 20: 27-38.
3. Albin, R.L. and Tagle, D.A. 1995. Genetics and molecular biology of Huntington's disease. Trends Neurosci. 18: 11-14.
4. Li, X.J., et al. 1995. A Huntingtin-associated protein enriched in brain with implications for pathology. Nature 378: 398-402.
5. Gusella, J.F., et al. 1996. Huntington's disease. Cold Spring Harb. Symp. Quant. Biol. 61: 615-626.
6. Burke, J.R., et al. 1996. Huntingtin and DRPLA proteins selectively interact with the enzyme GAPDH. Nat. Med. 2: 347-350.
7. 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.
8. Saudou, F., et al. 1998. Huntingtin acts in the nucleus to induce apoptosis but death does not correlate with the formation of intranuclear inclusions. Cell 95: 55-65.

CHROMOSOMAL LOCATION

Genetic locus: HTT (human) mapping to 4p16.3; Htt (mouse) mapping to 5 B2.

SOURCE

Huntingtin (8A4) is a mouse monoclonal antibody raised against amino acids 2703-2911 of Huntingtin 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.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Huntingtin (8A4) is recommended for detection of Huntingin 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Huntingtin siRNA (h): sc-35617, Huntingtin siRNA (m): sc-35618, Huntingtin siRNA (r): sc-270267, Huntingtin shRNA Plasmid (h): sc-35617-SH, Huntingtin shRNA Plasmid (m): sc-35618-SH, Huntingtin shRNA Plasmid (r): sc-270267-SH, Huntingtin shRNA (h) Lentiviral Particles: sc-35617-V, Huntingtin shRNA (m) Lentiviral Particles: sc-35618-V and Huntingtin shRNA (r) Lentiviral Particles: sc-270267-V.

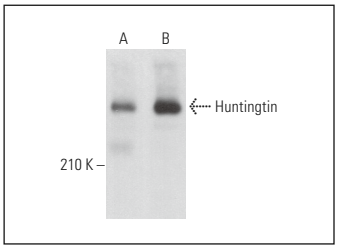
Molecular Weight of Huntingtin: 350 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or NAMALWA cell lysate: sc-2234.

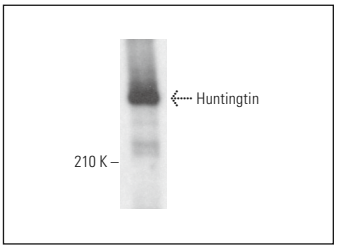
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Huntingtin (8A4): sc-47759. Western blot analysis of Huntingtin expression in K-562 (**A**) and HeLa (**B**) whole cell lysates.



Huntingtin (8A4): sc-47759. Western blot analysis of Huntingtin expression in NAMALWA whole cell lysate.

SELECT PRODUCT CITATIONS

1. Cariulo, C., et al. 2017. Phosphorylation of Huntingtin at residue T3 is decreased in Huntington's disease and modulates mutant Huntingtin protein conformation. Proc. Natl. Acad. Sci. USA 114: E10809-E10818.

RESEARCH USE

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