

PrP (H-8): sc-393165

BACKGROUND

Prion diseases, or transmissible spongiform encephalopathies (TSEs), are manifested as genetic, infectious or sporadic, lethal neurodegenerative disorders involving alterations of the prion protein (PrP). Characteristic of prion diseases, cellular PrP (PrP_c) is converted to the disease form, PrP^{Sc}, through alterations in the protein folding conformations. PrP_c is constitutively expressed in normal adult brain and is sensitive to proteinase K digestion, while the altered PrP^{Sc} conformation is resistant to proteases, resulting in a distinct molecular mass after PK treatment. Consistent with the transient infection process of prion diseases, incubation of PrP_c with PrP^{Sc} both *in vitro* and *in vivo* produces PrP^{Sc} that is resistant to protease degradation. Infectious PrP^{Sc} is found at high levels in the brains of animals affected by TSEs, including scrapie in sheep, BSE in cattle and Cruetzfeldt-Jakob disease in humans.

REFERENCES

1. Bessen, R.A. and Marsh, R.F. 1992. Biochemical and physical properties of the prion protein from two strains of the transmissible mink encephalopathy agent. *J. Virol.* 66: 2096-2101.
2. Bessen, R.A., et al. 1995. Non-genetic propagation of strain-specific properties of scrapie prion protein. *Nature* 375: 698-700.
3. Weiss, S., et al. 1996. Recombinant prion protein rPrP27-30 from Syrian golden hamster reveals proteinase K sensitivity. *Biochem. Biophys. Res. Commun.* 219: 173-179.
4. Prusiner, S.B. 1998. Prions. *Proc. Natl. Acad. Sci. USA* 95: 13363-13383.

CHROMOSOMAL LOCATION

Genetic locus: PRNP (human) mapping to 20p13.

SOURCE

PrP (H-8) is a mouse monoclonal antibody raised against amino acids 1-253 representing full length PrP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PrP (H-8) is recommended for detection of PrP of 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).

Suitable for use as control antibody for PrP siRNA (h): sc-36318, PrP shRNA Plasmid (h): sc-36318-SH and PrP shRNA (h) Lentiviral Particles: sc-36318-V.

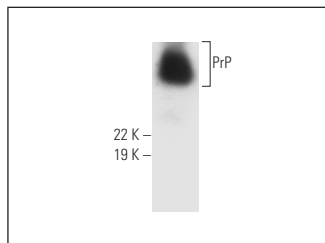
Molecular Weight of PrP: 30 kDa.

Positive Controls: human brain hippocampus tissue extract.

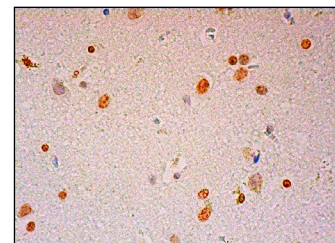
RECOMMENDED SUPPORT REAGENTS

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



PrP (H-8): sc-393165. Western blot analysis of PrP expression in human hippocampus tissue extract.



PrP (H-8): sc-393165. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lateral ventricle tissue showing nuclear staining of neuronal cells and glial cells.

SELECT PRODUCT CITATIONS

1. Yoon, Y.M., et al. 2020. Melatonin-stimulated exosomes enhance the regenerative potential of chronic kidney disease-derived mesenchymal stem/stromal cells via cellular prion proteins. *J. Pineal Res.* 68: e12632.

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.



See **PrP (5B2): sc-47730** for PrP antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.