SANTA CRUZ BIOTECHNOLOGY, INC.

PrP (AH6): sc-69896

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 (PrPc) is converted to the disease form, PrPSc, through alterations in the protein folding conformations. PrPc is constitutively expressed in normal adult brain and is sensitive to proteinase K digestion, while the altered PrPSc 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 PrPc with PrPSc both *in vitro* and *in vivo* produces PrPc that is resistant to protease degradation. Infectious PrPSc is found at high levels in the brains of animals affected by TSEs, including scrapie in sheep, BSE in cattle and Cruetzfeldt-Jacob 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.

CHROMOSOMAL LOCATION

Genetic locus: PRNP (human) mapping to 20p13; Prnp (mouse) mapping to 2 F2.

SOURCE

PrP (AH6) is a mouse monoclonal antibody raised against recombinant full length PrP of ovine 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.

PrP (AH6) is available conjugated to either phycoerythrin (sc-69896 PE) or fluorescein (sc-69896 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

PrP (AH6) is recommended for detection of C-terminal amino acid residues 90-230 of PrP of mouse, rat, human, ovine, hamster and deer 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)], flow cytometry (1 µg per 1 x 10^6 cells) 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 siRNA (m): sc-36319, PrP shRNA Plasmid (h): sc-36318-SH, PrP shRNA Plasmid (m): sc-36319-SH, PrP shRNA (h) Lentiviral Particles: sc-36318-V and PrP shRNA (m) Lentiviral Particles: sc-36319-V.

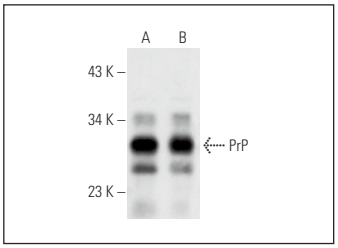
Molecular Weight of PrP: 30 kDa.

Positive Controls: rat brain extract: sc-2392 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



PrP (AH6): sc-69896. Western blot analysis of PrP expression in mouse brain (**A**) and rat brain (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Shi, F., et al. 2013. Prion protein participates in the regulation of classical and alternative activation of BV2 microglia. J. Neurochem. 124: 168-174.
2. Song, Z.Q., et al. 2014. Overexpression of BAT3 alleviates prion protein fragment PrP106-126-induced neuronal apoptosis. CNS Neurosci. Ther. 20: 737-747.
3. Wang, M., et al. 2014. The cellular prion protein negatively regulates phagocytosis and cytokine expression in murine bone marrow-derived macrophages. PLoS ONE 9: e102785.
4. Song, Z., et al. 2020. Comprehensive proteomic profiling of urinary exosomes and identification of potential non-invasive early biomarkers of Alzheimer's disease in 5XFAD mouse model. Front. Genet. 11: 565479.
5. Ribes, J.M., et al. 2023. Prion protein conversion at two distinct cellular sites precedes fibrillisation. Nat. Commun. 14: 8354.

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.

CONJUGATES

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