Product Information

Edition: 2013-04-25

Prion protein specific mAb 94B4, mouse monoclonal antibody for detection of prion protein (PrP)

Article number:

94B4/200 for quantity 0.2mg IgG
94B4/500 for quantity 0.5mg IgG

Batch: 051112-PrP-94B4

Shipping: with cool pack

Storage: at 0-5°C ready for use (or aliquot and store at -20°C to avoid repeated freezing/thawing)

Quantity: 0.5mg or 0.2mg IgG (larger quantities on request)

Format: liquid (advice: briefly spin the vial in a centrifuge to dislodge any liquid from the cap)

Concentration: 1.0mg IgG per ml, (based on UV280nm measurement with factor 1.43AU@1cm) in PBS pH7.2 as buffer, with 0.02% sodium azide as preservative.

Clone name: 66.94B4

Isotype: IgG1 κ

Purification: purified from culture supernatant by Protein G column chromatograpy, followed by dialysis and 0.2µm membrane filtration.

PrP antigen gene name: Prnp

Immunogen: recombinant E.Coli wild-type PrP molecule for the bovine species (bovinePrP25-242).

Selection: $Prnp^{0/0}$ mice were injected with the immunogen and spleen cells were fused with SP2/0 myeloma cells.

Epitope: HTVTTTTK (bovinePrP198-205; determined by Pepscan analysis ; however, this is not the whole epitope; 94B4 binding is assumed to be conformation dependent)

Expected species (cross) reactivity: broad (no species differences in known epitope sequence; tested on bovine, ovine, caprine, cervid, murine, hamster, bank vole and human TSEs).

Application: as capturing or detecting antibody in prion research on biological samples, body fluids, cells, tissue sections and homogenates. For use in Western blot, IHC, ELISA, RIA, FACS, immunoprecipitation, dot-blot, PET-blot.

Contact :

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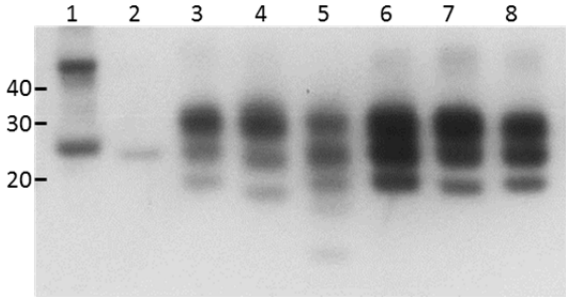
Examples:

Western blot:

PVDF membrane incubated with 0.5µg/ml primary antibody; secundary antibody rabbit anti-mouse Ig alkaline phosphatase; CDP-Star substrate.

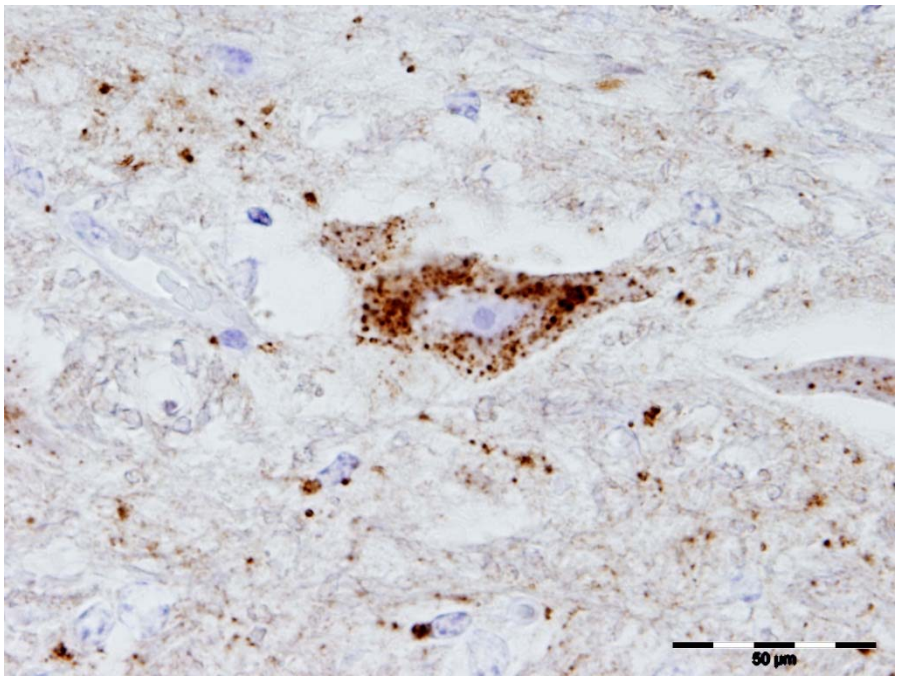


lane	sample	digestion	Amount*	Signal**
1	recombinant E.Coli bovine wt PrP25-242 (6-octarepeats)	No	5ng	++
2	recombinant E.Coli ovine wt PrP25-234 (ARQ)	No	15ng	+
3	classical scrapie ovine brain stem	+PK	0.1mgTE	+
4	C-type BSE in bovine brain stem	+PK	0.1mgTE	++
5	H-type BSE in bovine brain stem	+PK	0.25mgTE	++***
6	CWD in North-American elk brain	+PK	2.5mgTE	+
7	301V in VM murine brain	+PK	0.1mgTE	+
8	ME7 in RIII murine brain	+PK	0.1mgTE	+

*TE= tissue equivalents **See also our sheet with our different PrP-specific antibodies
***different glycoprofile

Immunohistochemistry:

Natural C-type BSE infected bovine brain stem with 0.2µg/ml primary antibody. Bar length is 50 µm. Formalin fixed tissues are routinely dehydrated and processed into paraffin. Tissue sections (4 µm) are mounted on silane coated slides and dried. The sections are deparaffinized in xylene and decreasing gradients of ethanol while the endogenous peroxidase activity is abolished with hydrogen peroxide in methanol. Pretreatment of tissue sections consists of 30 minutes immersion in formic acid followed by 5 minutes autoclaving in citrate solution pH6. After incubation with primary antibody the development takes place with EnVision-PO and DAB, followed by HE staining.



Research Use Only: This product is for Research Use Only and must not be used for diagnostic , therapeutic or manufacturing purposes.

Health, Safety and Waste:

All users of this product must ensure that:

(i) This product's specification is safe for their intended use
(ii) The product is handled in a safe manner using good laboratory practice and in accordance with any relevant local or national regulations pertaining to the use of such products; and
(iii) Any waste originating from the product or its use is disposed of in accordance with any relevant local or national regulations.

References:

First report:

Langeveld J.P.M., Wang J.J., Shih G.C., Garssen G. J., VandeWiel D.F.M., Bossers A., Shih J.C.H. Enzymatic degradation of prion protein in brain stem from infected cattle and sheep. J. Infect. Dis. 2003, 188:1782-1789.

Other literature:

- Thuring CMA, Erkens JHF, Jacobs JG, Bossers A, Van Keulen LJM, Garssen GJ, Van Zijderveld FG, Ryder SJ, Groschup MH, Sweeney T, Langeveld JPM. Discrimination between scrapie and bovine spongiform encephalopathy in sheep by molecular size, immunoreactivity and glycoprofile of prion protein. J. Clin. Microbiol. 2004, 42:972-980.
- Jacobs, JG, Langeveld JPM, Biacabe A-G, Acutis P-L, Polak M P, Gavier-Widen D, Buschmann A, Caramelli M, Casalone C, Mazza M, Groschup M, Erkens JHF, Davidse A, van Zijderveld FG, Baron T. Molecular discrimination of atypical bovine spongiform encephalopathy strains from a geographical region spanning a wide area in Europe. J Clin Microbiol. 2007, 45:1821-1829.
- Yull HM, Ritchie DL, Langeveld JPM, van Zijderveld FG, Bruce ME, Ironside JW, Head MW. Detection of type 1 prion protein in variant Creutzfeldt-Jakob disease. Am J Pathol. 2006, 168:151-157.

Animal for immunization:

$PrP^{0/0}$ mice, knock-out for PrP
Büeler H, Fischer M, Lang Y, Bluethmann H, Lipp HP, DeArmond SJ, Prusiner SB, Aguet M, Weissmann C. Normal development and behaviour of mice lacking the neuronal cell-surface PrP protein. Nature. 1992 Apr 16;356(6370):577-82.

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