Veterinary Medical
Research & Development

CERTIFICATE OF ANALYSIS

F89-160.1.5

Monoclonal Antibody

Catalog No. / Cell Line:	F89/160.1.5
Lot:	F89-008
Isotype:	IgG_1

Specificity:

Recognizes a conserved epitope (IHFG) on the prion protein in tissues from sheep, cattle, mule deer, elk, white tailed deer and humans.

Known Reactivity:

Agents of transmissible spongiform encephalopathies (TSEs), including sheep scrapie, bovine spongiform encephalopathy (BSE), chronic wasting disease (CWD).

Known Applications:

Detecting agents of TSEs in ruminant species. Techniques include immunoassays of formalin-fixed tissues, Western immunoblot, immunohistochemistry (except in cervid lymphoid tissue—use F99/97.6.1), ELISA.

Description and Handling:

This monoclonal antibody is produced as mouse ascites fluid, clarified by centrifugation, and filtered through a 0.2 μM filter. The concentration is 1.0 mg/ml in phosphate-buffered saline containing 4 mg/ml BSA, preserved with 0.09% sodium azide.

Quality Control Method:

F89/160.1.5 (lot F89-008) was evaluated by immunohistochemistry (IHC) of brain and lymph node from a scrapie-infected sheep, and brain and lymph node from a sheep with no known exposure to scrapie. The antibody was diluted to 0.5 μg/ml and incubated for 30 minutes with pretreated tissues. Detection was performed on a Ventana immunostainer using biotinylated goat anti-mouse Ig, streptavidin-horseradish peroxidase and AEC as the chromogen/substrate. There was no staining of the tissue from the sheep with no exposure to scrapie. Staining of the brain and lymph node of the scrapie-infected sheep was intense. The quality of this lot of antibody is excellent.

Tissues for IHC with this antibody are paraffin-embedded formalin-fixed tissues, often decontaminated by incubation of formalin-fixed tissue in formic acid for 60 minutes before re-equilibration in formalin and routine processing and embedding. Three to 5 micron sections are rehydrated, pretreated first with acid (98% formic acid 5-20 minutes, then rinsed and neutralized with several changes of 0.1 M Tris buffer, pH 7.5) then with heat (autoclaved at 121°C for 20 minutes in 0.1 M Tris buffer, pH 7.5 or in modified citrate buffer, pH 6.1, such as DAKO Target Retrieval Buffer).

Storage:

When the vial is stored at 2-8°C, it should be stable for one year.

References:

Klingeborn, M., *et al.* Characterization of proteinase K-resistant N- and C-terminally truncated PrP in Nor98 atypical scrapie. *J. Gen. Virol.* 87(6):1751-1760 (Jun. 2006).

Sharpe, A., *et al.* Clinical and pathological features of experimental scrapie in Irish Blackface Mountain sheep. *Res. Vet. Sci.* 80(1):71-78 (Feb. 2006).

References Continued on Back

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References Continued:

Jeffrey, M., *et al.* Ovine infection with the agents of scrapie (CH1641 isolate) and bovine spongiform encephalopathy: Immunochemical similarities can be resolved by immunohistochemistry. *J. Comp. Pathol.* 134(1):17-29 (Jan. 2006).

Kim, T.-Y., *et al.* Additional cases of chronic wasting disease in imported deer in Korea. *J. Vet. Med. Sci.* 67(8):753-759 (Aug. 2005).

Sharp, A., *et al.* Immunohistochemical studies of scrapie archival material from Irish ARQ/ARQ sheep for evidence of bovine spongiform encephalopathy-derived disease. *Res. Vet. Sci.* 79(1):29-35 (Aug. 2005).

Hamir, A.N., *et al.* Experimental transmission of chronic wasting disease agent from mule deer to cattle by the intracerebral route. *J. Vet. Diag. Invest.* 17(3):276-281 (May 2005).

Ersdal, C., *et al.* Mapping PrP^{Sc} propagation in experimental and natural scrapie in sheep with different PrP genotypes. *Vet. Pathol.* 42(3):258-274 (May 2005).

Gavier-Widen, D., *et al.* Recognition of the Nor98 variant of scrapie in the Swedish sheep population. *J. Vet. Diagn. Invest.* 16(6):562-567 (Nov. 2004).

Onnasch, H., *et al.* Two Irish cases of scrapie resembling Nor98. *Vet. Record* 155(20):636-637 (Nov. 2004).

Ersdal, C., *et al.* Accumulation of pathogenic prion protein (PrP^{Sc}) in nervous and lymphoid tissues of sheep with subclinical scrapie. *Vet. Pathol.* 40(2):164-174 (Mar. 2003).

Spraker, T.R., *et al.* Distribution of protease-resistant prion protein and spongiform encephalopathy in free-ranging mule deer (*Odocoileus hemionus*) with chronic wasting disease. *Vet. Pathol.* 39(5):546-556 (Sept. 2002).

Thorgeirsdottir, S., *et al.* Search for healthy carriers of scrapie: An assessment of subclinical infection of sheep in an Icelandic scrapie flock by three diagnostic methods and correlation with PrP genotypes. *Arch. Virol.* 147(4):709-722 (Apr. 2002).

Spraker, T.R., *et al.* Comparison of histological lesions and immunohistochemical staining of proteinase-resistant prion protein in a naturally occurring spongiform encephalopathy of free-ranging mule deer (*Odocoileus hemionus*) with those of chronic wasting disease of captive mule deer. *Vet. Pathol.* 39(1):110-119 (Jan. 2002).

Koo, H.C., *et al.* Immunohistochemical detection of prion protein (PRP-Sc) and epidemiological study of BSE in Korea. *J. Vet. Sci.* 2(1):25-31 (Apr. 2001).

O'Rourke, K.I., *et al.* Preclinical diagnosis of scrapie by immunohistochemistry of third eyelid lymphoid tissue. *J. Clin. Microbiol.* 38(9):3254-3259 (Sept. 2000).

Sigurdson, C.J., *et al.* Oral transmission and early lymphoid tropism of chronic wasting disease PrPres in mule deer fawns (*Odocoileus hemionus*). *J. Gen. Virol.* 80(10):2757-2764 (Oct. 1999).

Van Everbroeck, B., *et al.* Immunoreactivity of the monoclonal antibody F89/160.1.5 for the human prion protein. *Eur. J. Histochem.* 43(4):335-338 (1999).

O'Rourke, K.I., *et al.* Monoclonal antibody F89/160.1.5 defines a conserved epitope on the ruminant prion protein. *J. Clin. Microbiol.* 36(6):1750-1755 (June 1998).

O'Rourke, K.I., *et al.* Preclinical detection of PrPSc in nictitating membrane lymphoid tissue of sheep. *Vet. Rec.* 142(18):489-491 (May 1998).