Veterinary Medical
Research & Development

CERTIFICATE OF ANALYSIS

F89/160.1.5

Monoclonal Antibody

Catalog No. / Cell Line:	F89/160.1.5
Lot:	P100914-002
Isotype:	IgG_1

Specificity:

Recognizes a conserved epitope (IHFG) on the prion protein in tissues from sheep, cattle, mule deer, elk, cats and humans. Agents of transmissible spongiform encephalopathies (TSEs), including sheep scrapie, bovine spongiform encephalopathy (BSE), and 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:

This monoclonal antibody is produced as mouse ascites fluid, clarified by centrifugation, and filtered through a 0.2 μm filter. The antibody concentration is 1.0 mg/ml, in phosphate-buffered saline (PBS), stabilized with 4 mg/ml bovine serum albumin (BSA), and preserved with 0.09% sodium azide (NaN_3).

Quality Control Method:

F89/160.1.5 was evaluated by immunohistochemistry (IHC) of brain and lymph node from a scrapie-infected sheep, and lymph node from a sheep with no known exposure to scrapie. The antibody was diluted to 1.0 μg/ml and run according to the kit insert for VMRD Bovine Spongiform Encephalopathy Antigen Test Kit, Immunohistochemistry (catalog no. 298).

Specific Reaction: There was no staining of the tissue from the sheep with no exposure to scrapie. Staining for the scrapie-infected sheep was 3-4+ on the brain tissue and 2-3+ on the lymph node tissue.

Other Comments: NA

Storage:

When the vial is stored at 2-7°C, it should be stable for one year.

References:

Klingeborn M, Wik L, Simonsson M, *et al.* Characterization of proteinase K-resistant N- and C-terminally truncated PrP in Nor98 atypical scrapie. *J Gen Virol.* 2006 Jun;87(Pt 6):1751-60.

Sharpe A, McElroy M, Bassett H, *et al.* Clinical and pathological features of experimental scrapie in Irish Blackface Mountain sheep. *Res Vet Sci.* 2006 Feb;80(1):71-8.

Jeffrey M, González L, Chong A, *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.* 2006 Jan;134(1):17-29.

Kim TY, Shon HJ, Joo YS, *et al.* Additional cases of chronic wasting disease in imported deer in Korea. *J Vet Med Sci.* 2005 Aug;67(8):753-9.

References Continued on Back

PO Box 502
Pullman, WA 99163 USA

P: 509.334.5815
F: 509.332.5356

techserve@vmrd.com
www.vmrd.com

References Continued:

Sharp A, McElroy M, Langeveld JP, *et al.* Immunohistochemical studies of scrapie archival material from Irish ARQ/ARQ sheep for evidence of bovine spongiform encephalopathy-derived disease. *Res Vet Sci.* 2005 Aug;79(1):29-35. Epub 2004 Dec 16.

Hamir AN, Kunkle RA, Cutlip RC, *et al.* Experimental transmission of chronic wasting disease agent from mule deer to cattle by the intracerebral route. *J Vet Diagn Invest.* May;17(3):276-81.

Ersdal C, Ulvund MJ, Espenes A, *et al.* Mapping PrP^{Sc} propagation in experimental and natural scrapie in sheep with different PrP genotypes. *Vet Pathol.* 2005 May;42(3):258-74.

Gavier-Widén, D, Nöremark M, Benestad S, *et al.* Recognition of the Nor98 variant of scrapie in the Swedish sheep population. *J Vet Diagn Invest.* 2004 Nov;16(6):562-7.

Onnasch, H, Gunn HM, Bradshaw BJ, *et al.* Two Irish cases of scrapie resembling Nor98. *Vet Rec.* 2004 Nov 13:155(20):636-7.

Ersdal C, Ulvund MJ, Benestad SL, *et al.* Accumulation of pathogenic prion protein (PrP^{Sc}) in nervous and lymphoid tissues of sheep with subclinical scrapie. *Vet Pathol.* 2003 Mar;40(2):164-74.

Spraker TR, Zink RR, Cummings BA, *et al.* Distribution of protease-resistant prion protein and spongiform encephalopathy in free-ranging mule deer (*Odocoileus hemionus*) with chronic wasting disease. *Vet Pathol.* Sep;39(5):546-56.

Thorgeirsdottir S, Georgsson G, Reynission E, *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.* 2002 Apr:147(4):709-22.

Spraker TR, Zink RR, Cummings BA, *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.* 2002 Jan;39(1):110-9.

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

O'Rourke KI, Baszier TV, Besser TE, *et al.* Preclinical diagnosis of scrapie by immunohistochemistry of third eyelid lymphoid tissue. *J Clin Microbiol.* 2000 Sept;38(9):3254-9.

Sigurdson, CJ, Williams ES, Miller MW, *et al.* Oral transmission and early lymphoid tropism of chronic wasting disease PrPres in mule deer fawns (*Odocoileus hemionus*). *J Gen Virol.* 1999 Oct;80(PT 10):2757-64.

Van Everbroeck B, O'Rourke KI, Cras P. Immunoreactivity of the monoclonal antibody F89/160.1.5 for the human prion protein. *Eur J Histochem.* 1999;43(4):335-8.

O'Rourke KI, Baszier TV, Miller JM, *et al.* Monoclonal antibody F89/160.1.5 defines a conserved epitope on the ruminant prion protein. *J Clin Microbiol.* 1998 Jun;36(6):1750-5.

O'Rourke KI, Baszier TV, Parish SM, *et al.* Preclinical detection of PrPSc in nictitating membrane lymphoid tissue of sheep. *Vet Rec* 1998 May 2;142(18):489-91.

Nentwig A, Oevermann A, Heim D, *et al.* Diversity in neuroanatomical distribution of abnormal prion protein in atypical scrapie. *PLoS Pathog.* 2007 Jun;3(6):e82.