

## Bovine Spongiform Encephalopathy

Bovine Spongiform Encephalopathy (BSE), commonly called "Mad Cow Disease," has been under heightened awareness by the world scientific community since 1990. The nature of the infective agent that causes BSE is not fully understood, but the most common theory is that it is an infectious type of protein called a "prion." Other forms of the disease are called Transmissible Spongiform Encephalopathies (TSE's) and include scrapie in sheep, Chronic Wasting Disease in deer and elk and Creutzfeld-Jacob Disease (CJD) in humans. BSE is now thought to have occurred when cattle in the United Kingdom were fed scrapie-infected meat and bone meal, then meat and bone meal from these cows was in turn fed to additional cows.

BSE is a disease that causes the slow degeneration of the tissues and functions of the central nervous system of cattle and it is ultimately fatal. Infected animals display clinical signs that include loss of coordination, lowered body weight and milk production, disorientation and aggressive temperament. Due to a lengthy incubation period, it may take two to eight years for the degenerative signs to appear in infected animals. Although diagnostic tests can confirm its presence in post-mortem brain and spinal tissue samples, these clinical signs are the only indicators of the disease in live animals.

Currently there are no approved tests available for screening live cattle for BSE infection. Therefore, the best available assurance that bovine-derived products do not contain BSE is to source them from BSE-free or minimal-risk countries with no known indigenous cases of BSE. SAFC Biosciences sources all ruminant-derived products from such countries. Minimal-risk countries will have rigorous BSE surveillance testing schedules, have prohibited the import of live ruminants from any country considered to be at risk of BSE, initiated limitations on ruminant feed and made changes to slaughtering and processing practices to further reduce risk. In addition, SAFC Biosciences can provide traceability of all bovine-derived products back to the abattoir.

For more information about this subject or other SAFC Biosciences' products and services, please call our Technical Services department.

### References

- "USDA's BSE Testing — Protecting America's Herd", from the United States Department of Agriculture website, March 2005.
- "The WHO Recommendations on BSE: What They Mean to the United States", JAVMA (1996), 11-208
- "To Manufacturers of FDA-Regulated Drug/Biologic/Device Products", The Food and Drug Administration, May 9, 1996

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