

TABLE 1. (Continued) Rabies vaccines licensed and marketed in the United States, 2011

Product name	Produced by	Marketed by	For use in	Dose	Age at primary vaccination*	Booster recommended	Route of vaccination
Imrab 3 TF	Merial, Inc. License no. 298	Merial, Inc.	Dogs	1 mL	3 mos	1 yr later and triennially	IM or SC
			Cats	1 mL	3 mos	1 yr later and triennially	IM or SC
			Ferrets	1 mL	3 mos	Annually	SC
			Cattle	2 mL	3 mos	Annually	IM or SC
Imrab Large Animal	Merial, Inc. License no. 298	Merial, Inc.	Horses	2 mL	3 mos	Annually	IM or SC
			Sheep	2 mL	3 mos	1 yr later and triennially	IM or SC
			Monovalent (rabies glycoprotein, live canary pox vector)				
PureVax Feline Rabies	Merial, Inc. License no. 298	Merial, Inc.	Cats	1 mL	3 mos	Annually	SC
Combination (inactivated rabies)							
Continuum DAP-R	Intervet, Inc. License no. 165A	Intervet, Inc.	Dogs	1 mL	3 mos	1 yr later and triennially	SC
Continuum Feline HCP-R	Intervet, Inc. License no. 165A	Intervet, Inc.	Cats	1 mL	3 mos	1 yr later and triennially	SC
Equine Potomavac + Imrab	Merial, Inc. License no. 298	Merial, Inc.	Horses	1 mL	3 mos	Annually	IM
Combination (rabies glycoprotein, live canary pox vector)							
PureVax Feline 3/ Rabies	Merial, Inc. License no. 298	Merial, Inc.	Cats	1 mL	8 wks	Every 3 wks until 3 mos and annually	SC
					3 mos		
PUREVAX Feline 4/ Rabies	Merial, Inc. License no. 298	Merial, Inc.	Cats	1 mL	8 wks	Every 3 wks until 3 mos and annually	SC
					3 mos		
Oral (rabies glycoprotein, live vaccinia vector): restricted to use in state and federal rabies control programs							
Raboral V-RG	Merial, Inc. License no. 298	Merial, Inc.	Coyotes Raccoons	N/A	N/A	As determined by local authorities	Oral

Abbreviations: IM = intramuscular; N/A = not applicable; SC = subcutaneous; TF = thimerosal free.

* Minimum age (or older) and revaccinated 1 year later.

† Fort Dodge Animal Health was recently acquired by Boehringer Ingelheim Vetmedica, Inc.

§ One month = 28 days.

TABLE 2. Rabies vaccine manufacturer contact information

Manufacturer	Phone number	Internet address
Boehringer Ingelheim Vetmedica, Inc.	800-638-2226	Not available
Intervet, Inc.	800-441-8272	http://www.intervetusa.com
Merial, Inc.	888-637-4251	http://us.merial.com
Pfizer, Inc.	800-366-5288	http://www.pfizerah.com

References

1. American Public Health Association. Rabies. In: Heymann D, ed. *Control of communicable diseases manual*. 19th ed. Washington, DC: American Public Health Association; 2008:498–508.
2. Blanton JD, Palmer D, Christian KA, Rupprecht CE. Rabies surveillance in the United States during 2009. *J Am Vet Med Assoc* 2010;237:646–57.
3. Castrodale L, Walker V, Baldwin J, Hofmann J, Hanlon C. Rabies in a puppy imported from India to the USA, March 2007. *Zoonoses Public Health* 2008;55:427–30.
4. CDC. Rabies in a dog imported from Iraq—New Jersey, June 2008. *MMWR* 2008;57:1076–8.
5. McQuiston JH, Wilson T, Harris S, et al. Importation of dogs into the United States: risks from rabies and other zoonotic diseases. *Zoonoses Public Health* 2008;55:421–6.
6. Velasco-Villa A, Reeder SA, Orciari LA, et al. Enzootic rabies elimination from dogs and reemergence in wild terrestrial carnivores, United States. *Emerg Infect Dis* 2008;14:1849–54.
7. Beran GW. Rabies and infections by rabies-related viruses. In: Beran GW, ed. *Handbook of zoonoses section B: Viral*, 2nd ed. Boca Raton, FL: CRC Press; 1994:307–57.
8. Council of State and Territorial Epidemiologists. Public health reporting and national notification for animal rabies. Infectious disease positions statements, June 2009. Atlanta, GA: Council of State and Territorial Epidemiologists. Available at <http://www.cste.org/ps2009/09-ID-12.pdf>. Accessed September 1, 2011.
9. CDC. Human rabies prevention—United States, 2008. Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2008;57(No. RR-3).
10. CDC. Use of reduced (4-dose) vaccine schedule for postexposure prophylaxis to prevent human rabies. Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2010;59(No. RR-2).
11. McQuiston J, Yager PA, Smith JS, Rupprecht CE. Epidemiologic characteristics of rabies virus variants in dogs and cats in the United States, 1999. *J Am Vet Med Assoc* 2001;218:1939–42.
12. Murray KO, Holmes KC, Hanlon CA. Rabies in vaccinated dogs and cats in the United States, 1997–2001. *J Am Vet Med Assoc* 2009;235:691–5.
13. Frana TS, Clough NE, Gatewood DM, Rupprecht CE. Postmarketing surveillance of rabies vaccines for dogs to evaluate safety and efficacy. *J Am Vet Med Assoc* 2008;232:1000–2.
14. Hanlon CA, Childs JE, Nettles VF, et al. Recommendations of the Working Group on Rabies. Article III: rabies in wildlife. *J Am Vet Med Assoc* 1999;215:1612–8.
15. Slate D, Algeo TD, Nelson KM, et al. Oral rabies vaccination in North America: opportunities, complexities, and challenges. *PLoS Negl Trop Dis* 2009;3:1–9.
16. Council of State and Territorial Epidemiologists. Electronic laboratory reporting in the US: underfunded and under potential, or, recommendations for the implementation of ELR in the US. Policy Positions Statements. Atlanta, GA: Council of State and Territorial Epidemiologists; 2009. Available at <http://www.cste.org/ps2009/09-SI-03.pdf>. Accessed September 1, 2011.
17. Council of State and Territorial Epidemiologists. Process statement for immediately nationally notifiable conditions. Policy Positions Statements, Atlanta, GA: Council of State and Territorial Epidemiologists; 2009. Available at <http://www.cste.org/ps2009/09-SI-04.pdf>. Accessed September 1, 2011.
18. Hanlon CA, Smith JS, Anderson GR, et al. Recommendations of the Working Group on Rabies. Article II: laboratory diagnosis of rabies. *J Am Vet Med Assoc* 1999;215:1444–6.
19. Rudd RJ, Smith JS, Yager PA, et al. A need for standardized rabies-virus diagnostic procedures: effect of cover-glass mountant on the reliability of antigen detection by the fluorescent antibody test. *Virus Res* 2005;111:83–8.
20. American Veterinary Medical Association. AVMA guidelines on euthanasia. Schaumburg, IL: American Veterinary Medical Association; 2007. Available at http://www.avma.org/issues/animal_welfare/euthanasia.pdf. Accessed September 1, 2011.
21. Michigan Rabies Working Group. Humane euthanasia of bats for public health rabies testing. Lansing, MI: Michigan Rabies Working Group; 2008. Available at http://www.michigan.gov/documents/emergingdiseases/Humane_Euthanasia_of_Bats-Final_244979_7.pdf. Accessed September 1, 2011.
22. CDC. Public health response to a potentially rabid bear cub—Iowa, 1999. *MMWR* 1999;48:971–3.
23. Niezgodna M, Rupprecht CE. Standard operating procedure for the direct rapid immunohistochemistry test for the detection of rabies virus antigen. National Laboratory Training Network Course. Atlanta, GA: US Department of Health and Human Services, CDC; 2006:1–16. Available at http://www.rabiesblueprint.com/IMG/pdf/DRIT_SOP.pdf. Accessed September 1, 2011.
24. Lembo T, Niezgodna M, Velasco-Villa A, Cleaveland S, Ernest E, Rupprecht CE. Evaluation of a direct, rapid immunohistochemical test for rabies diagnosis. *Emerg Infect Dis* 2006;12:310–3.
25. Dürr S, Naïssengar S, Mindekem R, et al. Rabies diagnosis for developing countries. *PLoS Negl Trop Dis* 2008;26:e206.
26. Saturday GA, King R, Fuhrmann L. Validation and operational application of a rapid method for rabies antigen detection. *US Army Med Dep J* 2009;Jan–Mar:42–5.
27. Tizard I, Ni Y. Use of serologic testing to assess immune status of companion animals. *J Am Vet Med Assoc* 1998;213:54–60.
28. Greene CE, ed. Rabies and other lyssavirus infections. In: *Infectious diseases of the dog and cat*. 3rd ed. London, England: Saunders Elsevier; 2006:167–83.
29. Rupprecht CE, Gilbert J, Pitts R, Marshall K, Koprowski H. Evaluation of an inactivated rabies virus vaccine in domestic ferrets. *J Am Vet Med Assoc* 1990;196:1614–6.
30. Moore SM, Hanlon CA. Rabies-specific antibodies: measuring surrogates of protection against a fatal disease. *PLoS Negl Trop Dis* 2010;4:e595.
31. Aubert MF. Practical significance of rabies antibodies in cats and dogs. *Rev Sci Tech* 1992;11:735–60.
32. Muirhead TL, McClure JT, Wichtel JJ, et al. The effect of age on serum antibody titers after rabies and influenza vaccination in healthy horses. *J Vet Intern Med* 2008;22:654–61.
33. Shimazaki Y, Inoue S, Takahashi C, et al. Immune response to Japanese rabies vaccine in domestic dogs. *J Vet Med B* 2003;50:95–8.
34. Cliquet F, Verdier Y, Sagné L, et al. Neutralising antibody titration in 25,000 sera of dogs and cats vaccinated against rabies in France, in the framework of the new regulations that offer an alternative to quarantine. *Rev Sci Tech* 2003;22:857–66.