

VETERINARY VACCINES

Vaccination is one of the most effective tools for preventing animal diseases and for promoting animal health and welfare, safe food production and public health.

VETERINARY VACCINES

- ▶ Play a major role in preventing and **controlling serious epizootic diseases**.
- ▶ Have an impact on human health by ensuring **safe food supplies** and prevent **Animal-to-human transmission** of infectious diseases.
- ▶ **Reduce the need to use antibiotics** in animals, thereby contribute to the fight against antimicrobial resistance.

VETERINARY VACCINES DERIVED THROUGH RDNA TECHNOLOGY MAY BE DIVIDED INTO THREE BROAD CATEGORIES:

CATEGORY I

Consists of non-viable or killed products that pose negligible risk to the environment and present no new or unusual safety concerns. Such products include deactivated microorganisms, either whole or as sub-units, created by using rDNA techniques.

CATEGORY II

Products contain live microorganisms modified by adding or deleting one or more gene(s). Added genes may code for marker antigens, enzymes, or other biochemical by-products. Deleted genes may code for virulence, oncogenicity, marker antigens, enzymes, or other biochemical by-products. The genetic modifications must not result in any increase in virulence, pathogenicity, or survivability of the altered organism in comparison with the wild-type form. It is important that the genetic modification does not cause deterioration of the safety characteristics of the organism.

CATEGORY III

Products make use of **live vectors to carry recombinant-derived foreign genes** that code for immunizing antigens. Live vectors may carry one or more foreign gene(s) that have been shown to be effective for immunizing target host animals. The use of DNA vaccines containing recombinant-derived foreign genes that code for immunizing antigens (plasmid DNA vaccines) constitutes a new approach to vaccine development. The proper categorization of this type of rDNA-derived product will be established as soon as its biological properties and safety characteristics are determined.

These new vaccines can find application in a wide variety of situations as conventional products do.



This publication was funded by the European Union. Its contents are the sole responsibility of the NSF Euro Consultants Consortium and do not necessarily reflect the views of the European Union.



EU FOOD SAFETY
AB GIDA GÜVENLİĞİ