



DurGuard™ 5 + VL5

Bovine Rhinotracheitis-Virus Diarrhea-Parainfluenza 3-Bovine Respiratory Syncytial Virus-Killed Virus
Campylobacter fetus, *Leptospira canicola-grippotyphosa-hardjo-icterohaemorrhagiae-pomona* Bacterin

Description

DurGuard™ 5 +VL5 is a multivalent immunogen containing inactivated, adjuvanted, highly antigenic strains of IBR, BVD, PI3, and BRSV viruses in combination with *Campylobacter fetus*, *Leptospira canicola*, *grippotyphosa*, *hardjo*, *icterohaemorrhagiae*, and *pomona* Bacterin.

Product Benefits

- Contains Both Cytopathic Type 1 and Non Cytopathic Type 2 BVD Genotypes For Superior Protection
- No Immunosuppression From Killed BVD Results In High Immune Response To Other Vaccine Antigens
- Stimulates Long Term Memory Cells For Cell-Mediated Immunity Without The Risks Associated With Live Vaccines

Use Directions/Dosage

Shake well before using. Administer 5 ml intramuscularly 2-4 weeks prior to breeding. Revaccinate with **DurGuard™ 5** (Bovine Rhinotracheitis-Virus Diarrhea-Parainfluenza 3-Bovine Respiratory Syncytial Virus-Killed Virus) in 4-5 weeks. Revaccinate annually.

Precautions

Store in the dark at 35°-45° F (2°-7° C). DO NOT FREEZE. Use entire contents when first opened. Do not vaccinate within 60 days prior to slaughter. Transient swelling may occur at the site of injection. Anaphylactic reactions may occur following the use of this biological. Symptomatic treatment: Epinephrine.

Packaging

DurGuard™ 5 + VL5 is available in 10 dose (50 ml) vials and 50 dose (250 ml) bottles



Disease Information

Bovine Viral Diarrhea Virus (BVD)

Bovine Viral Diarrhea Virus is one of the most important bovine viral pathogens in the world. The complexity of the virus and its involvement in multiple bovine disease processes are only now beginning to be understood. Neutralizing antibodies for this Pestivirus have been detected in 50% to 90% of the clinically normal cattle tested in the United States. The virus is associated with **A**) Bovine Respiratory Disease; **B**) reproductive disorders including infertility, abortion, and neonatal defects and **C**) enteric disorders including Bovine Viral Diarrhea, Acute Mucosal Disease, and Chronic Mucosal Disease. In addition, the newly recognized Type 2 strains of BVD have been implicated in severe disease outbreaks where the animals often show hemorrhagic symptoms and death losses approach 100% of affected animals.

Infectious Bovine Rhinotracheitis (IBR)

Infectious Bovine Rhinotracheitis is caused by Bovine Herpes Virus 1, which is also responsible for the disease syndrome known as infectious pustular vulvovaginitis and balanoposthitis (IPV-IPB). It appears that the latter (IPV) was the primary form of the disease until the animals were concentrated into high population units such as beef feedlots and large dairy herds. The virus is associated with **A**) upper respiratory tract infection (IBR) and bovine respiratory disease, **B**) conjunctivitis and **C**) reproductive disorders including IPV, abortion, and neonatal death.

Parainfluenza 3 (PI3)

Parainfluenza-3 is a Paramyxovirus belonging to the same family as BRSV. PI3 virus has been isolated, identified and studied in relation to Bovine Respiratory Disease (BRD) syndrome. PI3 virus is commonly isolated from animals suffering from BRD, although it appears to be more of a contributing agent rather than a primary pathogen. By itself PI3 virus produces a rather benign infection of the lung. PI3 antibodies have been detected in approximately 90% of the cattle tested in the United States. It most commonly invades the lungs causing a fibrinous pleuritis and pneumonia.

Bovine Respiratory Syncytial Virus (BRSV)

Bovine Respiratory Syncytial Virus (BRSV) was first isolated in the United States in 1974 and recently has been identified as a major contributing agent in the Bovine Respiratory Disease (BRD) syndrome. It was named BRSV because this Pneumovirus invades the cell lining of the trachea and lungs and because it promotes the formation of large multinucleated cells called syncytial cells in the epithelium and interstitial spaces of the lung. BRSV appears to be widespread across the United States. In states where antibody prevalence testing has been done, 60% to 80% of the cattle tested are positive. Since research and information on BRSV are incomplete, we can only give a partial description of the disease syndrome produced by this virus. An initial exposure to the virus usually produces **1**) a *Mild Subclinical Infection* that occurs approximately 5 days after stress and exposure. Within 2-10 days after recovery from this primary infection some animals will exhibit **2**) a *Severe Clinical Form* of this disease, which if untreated will last 12-14 days and result in a high percentage of deaths. At any of these stages the course and severity of the disease can be aggravated by invasion of the weakened animal by other viral and bacterial pathogens.

Leptospirosis

Although leptospirosis is not the threat to our livestock industry that it once was, we can't forget about this organism. Leptospirosis is prevalent in all domestic animals, as well as wildlife populations such as skunks, opossums, and raccoons. This organism will not survive by itself in the environment. Animals that recover from leptospirosis may become carriers, and the organism may be shed in the urine for various periods of time. The susceptible animal ingests this organism, usually through feed or in the water contaminated by animals shedding the organism in the urine. Clinical signs in infected cattle are, for the most part, not observed. A particularly observant herdsman may notice a day or two of lowered feed consumption and in the case of milk cows, lowered milk production. The most frequent clinical sign of leptospirosis is an abortion in the last trimester of gestation. Red colored urine due to hemoglobinuria may be seen also.

Campylobacteriosis

Bovine genital Campylobacteriosis, previously known as Vibriosis, is a venereal disease of cattle caused by *Campylobacter fetus*. This disease is spread from bull to cow and cow to bull during breeding. It can also be spread through artificial insemination if the pipette or semen is contaminated. Infection with *Campylobacter* is subclinical and remains restricted to the vaginal and uterine mucosa of the cow and the mucous membrane of the penis and sheath of the bull. The uterine infection usually destroys the embryo at the earliest stages. However, in some instances the embryo survives, becomes infected and is aborted in the second trimester of pregnancy. The presence of the disease should be suspected when conception rates for a newly infected herd drop below 90%. Definite diagnosis can be made by identifying the organism in the cervical or vaginal mucus of the cow in preputial fluid from the infected bull.



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