

Tech Specs

ReproSTAR®

ReproSTAR®

Protect Against the Most Significant Causes of Leptospirosis¹

Few Vaccines Contain the Lepto Your Cattle Need the Most Protection Against—*Leptospira hardjo-bovis*. But ReproSTAR Does.

ReproSTAR is for vaccination of healthy cattle to protect against disease caused by *Leptospira borgpetersenii* serovar Hardjo-bovis. ReproSTAR provides 12-month duration of immunity against *L. hardjo-bovis*, one of the most destructive and economically significant reproductive diseases affecting cattle.

There are more than 200 pathogenic *Leptospira* serovars. Only five are generally included in cattle vaccines (see Figure 1). Of these five, only *L. hardjo-bovis* and *L. pomona* are considered significant pathogens in U.S. cattle.²

REPROSTAR L5 HB

INDICATIONS: This product has been shown to be effective for vaccination of healthy cattle against disease caused by *Leptospira canicola*, *L. grippityphosa*, *L. hardjo-bovis*, *L. icterohaemorrhagiae* and *L. pomona*. The product was licensed prior to the requirement to establish a minimum age of use. The duration of immunity for *L. hardjo-bovis* is at least 12 months and is unknown for other serovars. For more information, regarding efficacy and safety data, see productdata.aphis.usda.gov.

The product has been shown to be effective against kidney colonization, urinary shedding, and reproductive tract infection caused by *L. hardjo-bovis*. Vaccinated animals subsequently exposed to *L. borgpetersenii* serovar Hardjo type Hardjo-bovis have been shown to clear renal infections within 8 weeks of exposure.

ADJUVANT: Xtend® SP

DIRECTIONS: Shake well before using. Administer 2 mL subcutaneously. In accordance with Beef Quality Assurance guidelines, this product should be administered subcutaneously (under the skin) in the neck. Repeat in 4 to 6 weeks. Historically, annual revaccination with a single dose has been recommended with this product. The need for this booster has not been established. For advice on revaccination frequency, consultation with a veterinarian is recommended.

PRECAUTIONS: Store out of direct sunlight at 2° to 8° C (35° to 46° F). DO NOT FREEZE. This product has not been tested in pregnant animals. Use entire contents when first opened. Do not mix with other products, except as specified on this label. In case of human exposure, contact a physician. Do not vaccinate within 60 days prior to slaughter. Transient swelling may occur at the site of injection. Milk reduction and transient depression may be observed in lactating dairy cows for 3 to 6 days following vaccination. Anaphylactic reactions may occur. Symptomatic treatment: Epinephrine. Contains thimerosal as a preservative.

Scientists determined that *L. hardjo-bovis* is a distinct species from *L. hardjo-prajitno*,³ which has never been diagnosed in the U.S.⁴

REPROSTAR OPTIONS

	<i>L. canicola</i>	<i>L. grippityphosa</i>	<i>L. hardjo-prajitno</i>	<i>L. icterohaemorrhagiae</i>	<i>L. pomona</i>	<i>L. hardjo-bovis</i>	<i>Campylobacter fetus</i>
ReproSTAR L5 HB	■	■	**	■	■	■	
ReproSTAR VL5 HB	■	■	**	■	■	■	■

***L. hardjo-prajitno* cross protection provided through *L. hardjo-bovis* antigen

REPROSTAR VL5 HB

INDICATIONS: This product has been shown to be effective for vaccination of healthy cattle against disease caused by *Campylobacter fetus*, *Leptospira canicola*, *L. grippityphosa*, *L. hardjo-bovis*, *L. icterohaemorrhagiae* and *L. pomona*. The duration of immunity for *C. fetus* and *L. hardjo-bovis* is at least 12 months. The duration of immunity for the other antigens in this product has not been established. For more information, regarding efficacy and safety data, see productdata.aphis.usda.gov.

The product has been shown to be effective against kidney colonization, urinary shedding, and reproductive tract infection caused by *L. hardjo-bovis*. Vaccinated animals subsequently exposed to *L. borgpetersenii* serovar Hardjo type Hardjo-bovis have been shown to clear renal infections within 8 weeks of exposure.

ADJUVANT: Xtend SP

DIRECTIONS: Shake well before using. Administer 2 mL intramuscularly 2 to 4 weeks prior to breeding. Revaccinate in 4 to 6 weeks with ReproSTAR L5 HB. Historically, annual revaccination has been recommended for this product. The need for this booster has not been established. For advice on revaccination frequency, consultation with a veterinarian is recommended.

PRECAUTIONS: Store out of direct sunlight at 2° to 8° C (35° to 46° F). DO NOT FREEZE. This product has not been tested in pregnant animals. Use entire contents when first opened. Do not mix with other products, except as specified on this label. In case of human exposure, contact a physician. Do not vaccinate within 60 days prior to slaughter. Transient swelling may occur at the site of injection. Milk reduction and transient depression may be observed in lactating dairy cows for 3 to 6 days following vaccination. Anaphylactic reactions may occur. Symptomatic treatment: Epinephrine. Contains thimerosal as a preservative.

FIGURE 1. REPROSTAR® CONTAINS THE LEPTOSPIROSIS COVERAGE YOU NEED

ReproSTAR®

Contained in all cattle leptospirosis vaccines, including **ReproSTAR**

- L. canicola*
- L. grippityphosa*
- L. icterohaemorrhagiae*
- L. pomona*

Leptospira serovars

- hardjo-prajitno* — Common in most leptospirosis vaccines. Has not been diagnosed in the U.S.
- hardjo-bovis* — Only *hardjo* diagnosed in the U.S. Contained in **ReproSTAR**

WHY USE REPROSTAR?

- Stimulates immunity against five strains of *Leptospira*, including *L. hardjo-bovis*, the most common cause of bovine leptospirosis in U.S. cattle¹
- Provides a cost-effective option for *L. hardjo-bovis* protection, the only *L. hardjo* serovar to affect U.S. cattle
- Contains the U.S. strain of *L. hardjo-bovis*. **ReproSTAR** and **Vira Shield®** are the only leptospirosis products to do so
- Offers protection against *Campylobacter fetus* (previously known as *Vibrio fetus*) when **ReproSTAR VL5 HB** is used

For leptospirosis protection combined with defense against causes of Bovine Respiratory Disease, consider **Vira Shield 6 + L5 HB** or **Vira Shield 6 + VL5 HB**.



To learn more about ReproSTAR, contact your herd health veterinarian, Elanco sales representative or technical consultant, or visit Elanco.us

The label contains complete use information, including cautions and warnings. Always read, understand and follow the label and use directions.

¹ Zuerner RL, Bolin CA. Repetitive sequence element cloned from *Leptospira interrogans* serovar Hardjo type Hardjo-bovis provides a sensitive diagnostic probe for bovine leptospirosis. *J Clin Microbiol* 1988;26:2495-2500.
² Hairgrove TB. Leptospirosis in cattle. *AABP Proc* 2004;37.
³ Ramadass P, Marshal RB. Species differentiation of *Leptospira interrogans* serovar Hardjo type Hardjo-bovis from strain Hardjo-prajitno by DNA slot blot hybridisation. *Res Vet Sci* 1990;49(2):194-7.
⁴ Wikse SE, Rogers GM, Ramachandran S, et al. Herd prevalence and risk factors of *Leptospira* infection in beef cow/calf operations in the United States: *Leptospira borgpetersenii* serovar Hardjo. *Bov Pract* 2007;41(1):15-23.

