

Merck Animal Health Cattle Vaccines

Protect your cattle and profitability.



MERCK
Animal Health



Vaccines make good business sense.

Cattle vaccines from Merck Animal Health give you the power to get in front of profit-robbing disease. So instead of treating diseases, you can focus on producing healthy, profitable cattle.

Talk to your veterinarian today to determine which vaccines can help you run the most cost-efficient and profitable operation.





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A vaccine with this symbol is proven to cause fewer reactions. It won't disrupt productivity and will help you see healthier cattle and higher profits.¹⁻⁵

¹Effects of Vaccination with Vista® 5 L5 SQ or Bovi-Shield GOLD® FP® L5 on Milk Production. 2010.

²Technical Reference 96-4: Evaluation of Injection-Site Blemishes Using Ultrasonography Following Administration of Two Commercial Multivalent Clostridial Vaccines.

³Merck Veterinary Update: Post-Vaccinal Milk Response in Dairy Cows to Three Vaccines for the Control of Neonatal Diarrhea. 2007.

⁴Spire MF. Once PMH® IN Endotoxin Load. 2015.

⁵Field Safety Study of a Low-Reactive Clostridium Chauvoei-Septicum-Haemolytica-Novyi-Sordellii-Tetani-Perfringes Types C&D Bacterin-Toxoid (Cavalry 9). APHIS Product Code No. 7340.00. 2005.

Respiratory Disease Prevention

Respiratory diseases are the most common and costly infections plaguing the North American cattle industry. The comprehensive vaccine lineup from Merck Animal Health can offer you the protection you need – for both your herd and your profits.

	IBR	PI ₃	BRSV	BVD Type 1	BVD Type 2	<i>Mannheimia haemolytica</i>	<i>Pasteurella multocida</i>
Vista® Once SQ	•	•	•	•	•	•	•
Vista® BVD CFP				•	•		
Vista® 5 SQ	•	•	•	•	•		
Once PMH® SQ						•	•
Once PMH® IN						•	•
Nasalgen® IP	•	•					
Nasalgen® 3	•	•	•				



Vista®

The most complete respiratory protection available.

Vista® Once SQ

For the vaccination of healthy cattle 3 months of age or older.

Aids in the prevention of disease caused by:

- Infectious bovine rhinotracheitis (IBR)
- Bovine viral diarrhea (BVD) Type 2
- Bovine respiratory syncytial virus (BRSV)

Aids in the control of disease caused by:

- BVD Type 1
- Parainfluenza 3 (PI₃)
- *Mannheimia haemolytica*
- *Pasteurella multocida*

Features:

- The only respiratory vaccine available offering avirulent-live protection against the two leading contributors to bacterial pneumonia: *M. haemolytica* and *P. multocida*
- Both viral and bacterial components of VISTA ONCE SQ are live: modified-live virus + avirulent-live bacteria
- Proven to have lower endotoxin levels than Bovi-Shield Gold One Shot®, Pyramid® 5 + Presponse® SQ and Titanium® 5 + PH-M¹
- One-dose BRSV (no booster required)

Duration of Immunity

Duration of immunity (DOI) has been demonstrated to be at least one year for IBR and BVD Types 1 and 2 and at least 16 weeks for *M. haemolytica* and *P. multocida*. Reproductive DOI has been demonstrated to be at least 217 days for IBR and at least 206 days for BVD Types 1 and 2.

Dosage

2 mL administered subcutaneously to healthy cattle 3 months of age or older. For advice on revaccination frequency, contact your veterinarian.

Safety

Safe for use in pregnant heifers and cows or calves nursing pregnant cows provided the cows and heifers in the herd are vaccinated prior to breeding, within the previous 12 months, with any of the modified live IBR and BVD containing vaccines in this product line.

Supplied

10-dose, 50-dose



Vista® BVD CFP

Shown to be effective for the vaccination of healthy cattle against respiratory disease and fetal infection, including persistently infected calves due to bovine viral diarrhea (BVD) Type 1 and Type 2.

Duration of Immunity

Duration of immunity (DOI) has been demonstrated to be at least one year for BVD Types 1 and 2. Reproductive DOI has been demonstrated to be at least 206 days for BVD Types 1 and 2.

Dosage

2 mL administered subcutaneously. For advice on revaccination frequency, contact your veterinarian.

Safety

Safe for use in pregnant heifers and cows or calves nursing pregnant cows provided the cows and heifers in the herd are vaccinated prior to breeding, within the previous 12 months, with any of the modified live infectious bovine rhinotracheitis (IBR) and BVD containing vaccines in this product line.

Supplied

10-dose, 50-dose



Vista® 5 SQ

For the vaccination of healthy cattle 3 months of age or older.

Aids in the prevention of disease caused by:

- Infectious bovine rhinotracheitis (IBR)
- Bovine viral diarrhea (BVD) Type 2
- Bovine respiratory syncytial virus (BRSV)

As an aid in the control of disease caused by:

- BVD Type 1
- Parainfluenza 3 (PI₃)

Duration of Immunity

Duration of immunity (DOI) has been demonstrated to be at least one year for IBR and BVD Types 1 and 2. Reproductive DOI has been demonstrated to be at least 217 days for IBR and at least 206 days for BVD Types 1 and 2.

Dosage

2 mL administered subcutaneously to healthy cattle 3 months of age or older. For advice on revaccination frequency, contact your veterinarian.

Safety

Safe for use in pregnant heifers and cows or calves nursing pregnant cows provided the cows and heifers in the herd are vaccinated prior to breeding, within the previous 12 months, with any of the modified live IBR and BVD containing vaccines in this product line.

Supplied

10-dose, 50-dose



Once PMH® SQ and Once PMH® IN

Mannheimia haemolytica and *Pasteurella multocida* prevention you can't find anywhere else.*

Once PMH® SQ

The only avirulent-live, dual-action bacterial pneumonia vaccine available for cattle 3 months of age or older.

Aids in the control of respiratory disease caused by:

- *Mannheimia haemolytica*
- *Pasteurella multocida*

Duration of Immunity

Duration of immunity (DOI) has been demonstrated to be at least 16 weeks for *M. haemolytica* and *P. multocida*.

Dosage

2 mL administered subcutaneously to healthy cattle 3 months of age or older. For advice on revaccination frequency, contact your veterinarian.

Supplied

10-dose, 50-dose

*VISTA ONCE SQ and ONCE PMH SQ provide 16-week protection against *M. haemolytica* and *P. multocida* – the only products with duration claims against these respiratory bacteria.



Once PMH® IN

The first and only intranasal vaccine that delivers dual bacterial pneumonia protection for healthy cattle starting as young as 1 week of age.

Aids in the prevention of disease caused by *Pasteurella multocida*.
Aids in the control of disease caused by *Mannheimia haemolytica*.

Features:

- Shown to have a lower endotoxin load compared to other bacterial respiratory vaccines on the market¹
- No injection site due to intranasal route of administration
- Provides protection against two of the leading bacterial causes of bovine respiratory disease (BRD) while optimizing post-vaccination performance²

Dosage

2 mL administered intranasally into one nostril or 1 mL into each nostril for a 2 mL dose.

Supplied

10-dose, 50-dose, 25x1-dose



¹02/15 BV-VST-51134-2-VISTA-ENDOTOXIN-LOAD.

²Meyer B, Hill K, Burdett B, Sibbel R, Engelken T, Roth J, Renter D. Post-vaccination production and inflammatory response in calves administered a novel intranasal avirulent-live bacteria. 12/13.

Nasalgen[®]

Protect your whole herd from infectious bovine rhinotracheitis and parainfluenza 3.

Nasalgen[®] IP

Safe for use in pregnant cows or in calves nursing pregnant cows.
Calves vaccinated under 5 months of age should be revaccinated at 5 months of age or weaning.

Aids in the prevention of disease caused by:

- Infectious bovine rhinotracheitis (IBR)
- Parainfluenza 3 (PI₃)

Features:

- Safe in all classes of cattle, including pregnant cows, pregnant heifers and nursing calves
- Provides rapid onset of protection
- Stimulates interferon response providing nonspecific antiviral activity to aid in protection against a variety of airborne pathogens¹
- Stimulates local production of antibodies at the site where infectious pathogens enter the respiratory system – the mucosal lining of the nasal cavity
- Stimulates active immunity in the face of maternal antibodies^{2,3}
- No temperature sensitivity issues that would negatively impact replication once administered to cattle⁴

Dosage

2 mL administered intranasally into one nostril or 1 mL into each nostril for a 2 mL dose.

Supplied

10-dose, 50-dose



Nasalgen[®] 3

Safe for use in pregnant cows and in calves nursing pregnant cows.
This product has been shown to be effective for the vaccination of calves 1 week of age or older against infectious bovine rhinotracheitis (IBR), bovine respiratory syncytial virus (BRSV) and parainfluenza 3 (PI₃).

Features:

- Strong, early response for powerful, long-lasting protection⁴
- Mimics natural exposure to the most common causes of pneumonia for an effective immune response
- Unique blue shadow for confident administration
- Designed with an IBR that is not temperature-sensitive, allowing for replication and effective prevention of pneumonia in any situation⁵
- Helps operations meet Beef Quality Assurance standards

Duration of Immunity

- 11 weeks: BRSV
- 3 months: PI₃
- 6½ months: IBR

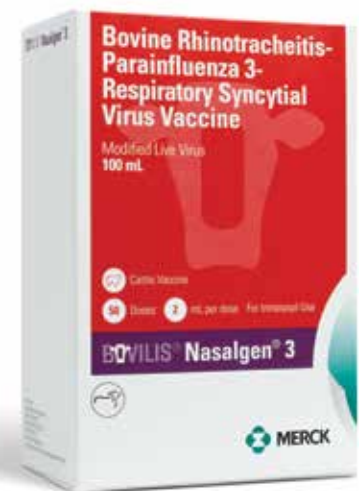
The 6½-month duration of immunity (DOI) against IBR provides longer-lasting protection than the competition.⁶

Dosage

2 mL administered intranasally into one nostril.

Supplied

1-dose, 10-dose, 50-dose



¹Todd JD, Volenc FJ, Paton IM. Interferon in nasal secretions and sera of calves after intranasal administration of avirulent infectious bovine rhinotracheitis virus: association of interferon in nasal secretions with early resistance to challenge with virulent virus. *Infect Immun*. 1972;5(5):699-706.

²Hyland S. "Comparison of two strains of infectious bovine rhinotracheitis virus: Biological effects in neonatal calves and antigenic comparison by radioimmune comparison assay," doctoral thesis, University of Wisconsin Madison, 1978.

³Ellis JA, Gow SP, Goji N. Response to experimentally induced infection with bovine respiratory syncytial virus following intranasal vaccination of seropositive and seronegative calves. *J Am Vet Med Assoc*. 2010;236(9): 991-999.

⁴Todd JD. Intranasal vaccination of cattle against IBR and PI₃: field and laboratory observations in dairy, beef, and neonatal calf populations. *Dev Biol Stand*. 1976;33:391-395.

⁵Grissett GP, White BJ, Anderson DE, Larson RE, Miesner MD. Effect of ambient temperature on viral replication and serum antibody titers following administration of a commercial intranasal modified-live infectious bovine rhinotracheitis-parainfluenza-3 vaccine to beef cattle housed in high- and moderate-ambient temperature environments. *Am J Vet Res*. 2014;75(12):1076-1082.

⁶Based on product labels.



Clostridial Disease Prevention

Naturally found in soil and the intestines of cattle, clostridial organisms can cause unexpected mortality to a herd in the form of blackleg and other fatal diseases. Protect your herd's health and your profits with a range of cattle friendly vaccines from Merck Animal Health.

	<i>C. chauvoei</i>	<i>C. septicum</i>	<i>C. haemolyticum</i>	<i>C. novyi Type B</i>	<i>C. sordellii</i>	<i>C. perfringens Type C</i>	<i>C. perfringens Type D</i>	<i>Haemophilus somnus</i>	<i>C. tetani</i>	<i>Moraxella bovis</i>
Vision® 7	•	•		•	•	•	•			
Vision® 7 SOMNUS	•	•		•	•	•	•	•		
Vision® 8	•	•	•	•	•	•	•			
Vision® 8 SOMNUS	•	•	•	•	•	•	•	•		
Vision® CD						•	•			
Vision® CD-T						•	•		•	
Vision® 20/20	•	•		•	•	•	•			•
Cavalry® 9	•	•	•	•	•	•	•		•	
Covexin® 8	•	•	•	•		•	•		•	

Vision®

A high level of immunization with a low level of injection-site reactions.

Vision® 7

For the vaccination of healthy cattle.

Aids in the prevention of disease caused by:

- *Clostridium chauvoei* (Blackleg)
- *C. septicum* (Malignant edema)
- *C. novyi* Type B (Black disease)
- *C. sordellii*
- *C. perfringens* Types C and D (Enterotoxemia)

Dosage

2 mL administered subcutaneously followed by another 2 mL injection three to four weeks later. Annual revaccination is recommended.

Supplied

10-dose, 50-dose, 250-dose



Vision® 7 SOMNUS

For the vaccination of healthy cattle.

Aids in the prevention of disease caused by:

- *Clostridium chauvoei* (Blackleg)
- *C. septicum* (Malignant edema)
- *C. novyi* Type B (Black disease)
- *C. sordellii*
- *C. perfringens* Types C and D (Enterotoxemia)
- *Haemophilus somnus*

Dosage

2 mL administered subcutaneously followed by another 2 mL injection three to four weeks later. Annual revaccination is recommended.

Supplied

10-dose, 50-dose, 250-dose



Vision® 8

For the vaccination of healthy cattle.

Aids in the prevention of disease caused by:

- *Clostridium chauvoei* (Blackleg)
- *C. septicum* (Malignant edema)
- *C. haemolyticum* (Red Water)
- *C. novyi* Type B (Black disease)
- *C. sordellii*
- *C. perfringens* Types C and D (Enterotoxemia)

Dosage

2 mL administered subcutaneously followed by another 2 mL injection three to four weeks later. In animals subject to reexposure to *C. haemolyticum*, revaccinate every five to six months. Annual revaccination is recommended.

Supplied

10-dose, 50-dose



Vision® 8 SOMNUS

For the vaccination of healthy cattle.

Aids in the prevention of disease caused by:

- *Clostridium chauvoei* (Blackleg)
- *C. septicum* (Malignant edema)
- *C. haemolyticum* (Red Water)
- *C. novyi* (Black disease)
- *C. sordellii*
- *C. perfringens* Types C and D (Enterotoxemia)
- *Haemophilus somnus*

Dosage

2 mL administered subcutaneously followed by another 2 mL injection three to four weeks later. In animals subject to reexposure to *C. haemolyticum*, revaccinate every five to six months. Annual revaccination is recommended.

Supplied

10-dose, 50-dose



Vision® CD

For the vaccination of healthy cattle.

Aids in the prevention of disease caused by:

- *Clostridium perfringens* Types C and D (Enterotoxemia)

Dosage

2 mL administered subcutaneously followed by another 2 mL injection three to four weeks later. Annual revaccination is recommended.

Supplied

250-dose



Vision® CD-T

For the vaccination of healthy cattle.

Aids in the prevention of disease caused by:

- *Clostridium perfringens* Types C and D (Enterotoxemia)
- *C. tetani* (Tetanus)

Dosage

2 mL administered subcutaneously followed by another 2 mL injection three to four weeks later. Annual revaccination is recommended.

Supplied

50-dose



Cavalry® 9

Broad, powerful protection against nine clostridial diseases, including tetanus. Providing demonstrated superior immune response with low tissue reactivity.

Cavalry® 9

For the vaccination of healthy cattle 3 months of age and older.

Aids in the prevention of disease caused by:

- *Clostridium chauvoei* (Blackleg)
- *C. septicum* (Malignant edema)
- *C. novyi* Type B (Black disease)
- *C. haemolyticum* (Red Water)
- *C. sordellii*
- *C. tetani* (Tetanus)
- *C. perfringens* Types C and D (Enterotoxemia)

Dosage

2 mL injection administered subcutaneously followed by a second 2 mL dose given three weeks later. Revaccinate annually with 2 mL prior to periods of extreme risk or parturition.

Supplied

10-dose, 50-dose, 125-dose



Covexin® 8

Protect calves and pregnant cows against eight clostridial diseases with one easy-to-use, highly effective vaccine.

Covexin® 8

For the vaccination of healthy cattle.

Aids in the prevention of disease caused by:

- *Clostridium chauvoei* (Blackleg)
- *C. septicum* (Malignant edema)
- *C. novyi* Type B (Black disease)
- *C. haemolyticum* (Red Water)
- *C. perfringens* Types C and D (Enterotoxemia)
- *C. tetani* (Tetanus)

Dosage

5 mL injection administered subcutaneously or intramuscularly followed by a second 5 mL dose given six weeks later. Revaccinate annually with 5 mL dose prior to periods of extreme risk or parturition. Calves vaccinated under 3 months of age should be revaccinated at weaning or 4 to 6 months of age.

Supplied

10-dose, 50-dose, 125-dose



Reproductive Health

Breeding stock and their offspring are critical to the success of your operation. Protect both with the reproductive lineup of vaccines from Merck Animal Health.

	IBR	PI ₃	BRSV	BVD Type 1	BVD Type 2	<i>L. canicola</i>	<i>L. icterohaemorrhagiae</i>	<i>L. grippotyphosa</i>	<i>L. pomona</i>	<i>L. hardjo*</i>	<i>Campylobacter fetus</i>
Vista® 5 L5 SQ	•	•	•	•	•	•	•	•	•	•	
Vista® 5 VL5 SQ	•	•	•	•	•	•	•	•	•	•	•
L5 SQ						•	•	•	•	•	
VL5 SQ						•	•	•	•	•	•

**L. hardjo* protection includes the *L. borgpetersenii* serovar *hardjo* bovis.



Vista®

Complete reproductive protection that lasts through the entire pregnancy.

Vista® 5 L5 SQ

For the vaccination of healthy cows and heifers prior to breeding:

Aids in the reduction of abortion caused by infectious bovine rhinotracheitis (IBR).

Aids in the prevention of fetal infection, including persistently infected calves caused by bovine viral diarrhoea (BVD) Type 1 and Type 2.

Aids in the prevention of disease caused by:

- IBR
- BVD Type 2
- Bovine respiratory syncytial virus (BRSV)

Aids in the control of disease caused by:

- BVD Type 1
- Parainfluenza 3 (PI₃)

Aids in the prevention of leptospirosis caused by:

- *Leptospira canicola*
- *L. grippityphosa*
- *L. hardjo* (including the *L. borgpetersenii* serovar *hardjo bovis*)
- *L. icterohaemorrhagiae*
- *L. pomona*

Aids in the prevention of urinary shedding of *L. hardjo* organisms.

Duration of Immunity

Reproductive duration of immunity (DOI) demonstrated to be at least 217 days for IBR and at least 206 days for BVD Types 1 and 2. Respiratory DOI has been demonstrated to be at least 182 days for IBR, at least 206 days for BVD Type 1 and at least 200 days for BVD Type 2.

Dosage

2 mL administered subcutaneously 14 to 60 days prior to breeding to healthy cattle 6 months of age or older. Annual revaccination is recommended. For advice on revaccination frequency, contact your veterinarian.

Safety

Safe for use in pregnant heifers and cows or calves nursing pregnant cows provided the cows and heifers in the herd are vaccinated prior to breeding, within the previous 12 months, with any of the modified live IBR and BVD containing vaccines in this product line.

Supplied

5-dose, 10-dose, 50-dose



Vista® 5 VL5 SQ

For the vaccination of healthy cows and heifers prior to breeding.

Aids in the reduction of abortion caused by infectious bovine rhinotracheitis (IBR).

Aids in the prevention of fetal infection, including persistently infected calves caused by bovine viral diarrhoea (BVD) Type 1 and Type 2.

Aids in the prevention of disease caused by:

- IBR
- BVD Type 2
- Bovine respiratory syncytial virus (BRSV)

Aids in the control of disease caused by:

- BVD Type 1
- Parainfluenza 3 (PI₃)

Aids in the reduction of infertility caused by *Campylobacter fetus*.

Aids in the prevention of leptospirosis caused by:

- *Leptospira canicola*
- *L. grippityphosa*
- *L. hardjo* (including the *L. borgpetersenii* serovar *hardjo bovis*)
- *L. icterohaemorrhagiae*
- *L. pomona*

Aids in the prevention of urinary shedding of *L. hardjo* organisms.



Continued on next page.

Duration of Immunity

Reproductive duration of immunity (DOI) demonstrated to be at least 217 days for IBR and at least 206 days for BVD Types 1 and 2. Respiratory DOI has been demonstrated to be at least 182 days for IBR, at least 206 days for BVD Type 1 and at least 200 days for BVD Type 2.

Dosage

2 mL administered subcutaneously 14 to 60 days prior to breeding healthy cattle 6 months of age or older. Annual revaccination is recommended. For advice on revaccination frequency, contact your veterinarian.

Safety

Safe for use in pregnant heifers and cows or calves nursing pregnant cows provided the cows and heifers in the herd are vaccinated prior to breeding, within the previous 12 months, with any of the modified live IBR and BVD containing vaccines in this product line.

Supplied

10-dose, 50-dose

L5 SQ

For the vaccination of healthy cattle 6 months of age and older.

Aids in the prevention of leptospirosis caused by:

- *Leptospira canicola*
- *L. grippityphosa*
- *L. hardjo*
- *L. borgpetersenii serovar hardjo bovis*
- *L. icterohaemorrhagiae*
- *L. pomona*

Aids in prevention of urinary shedding of *L. hardjo* organisms.

Dosage

Shake vial well and inject 2 mL subcutaneously to healthy cattle 6 months of age and older. If packaged with VISTA 5 SQ, refer to carton for complete directions. Annual revaccination is recommended.

Supplied

10-dose, 50-dose



VL5 SQ

For the vaccination of healthy cattle.

Aids in the prevention of disease caused by five strains of leptospirosis, including *hardjo bovis*.

Aids in preventing urinary shedding of *Leptospira hardjo* organisms.

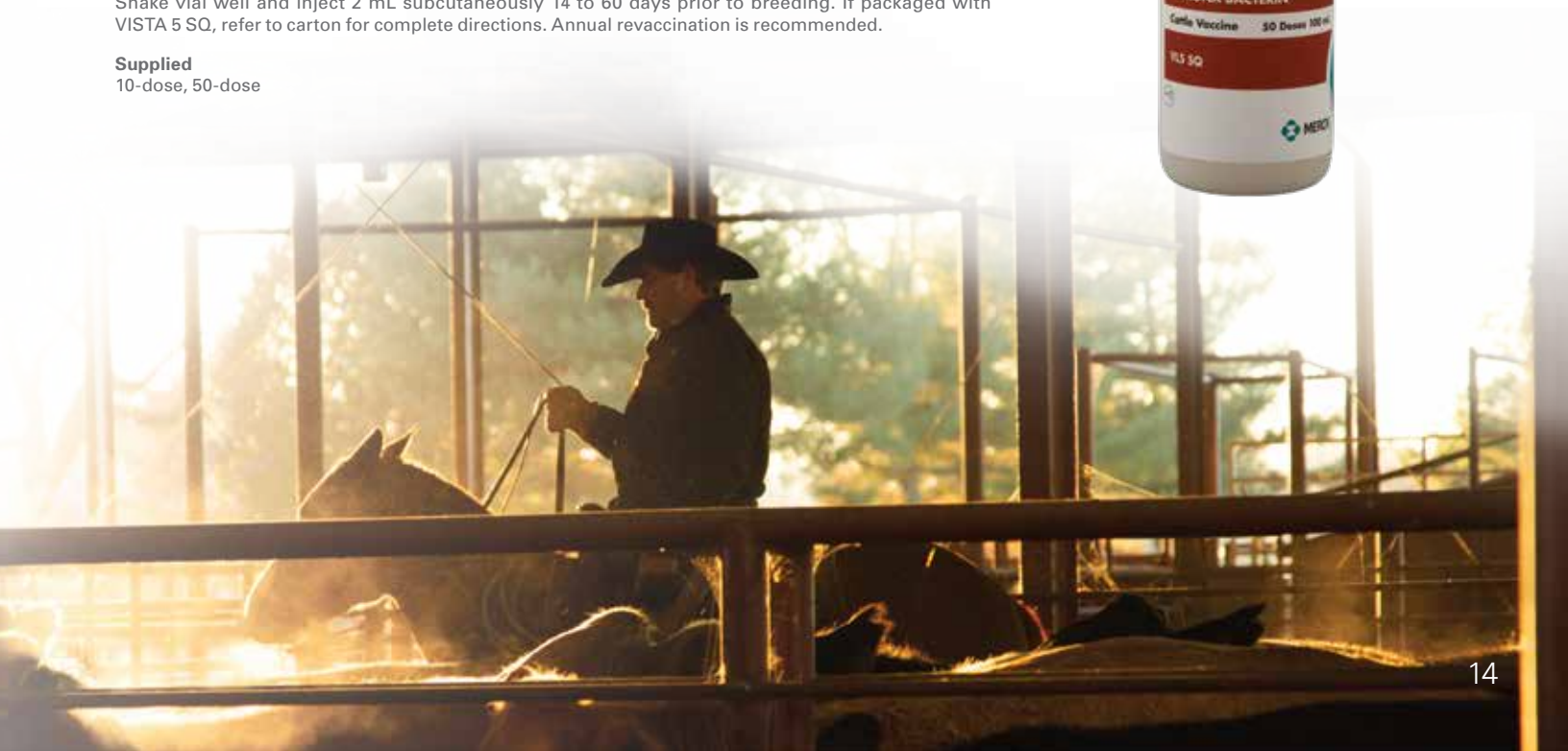
Aids in the control of reproductive diseases caused by *Campylobacter fetus*.

Dosage

Shake vial well and inject 2 mL subcutaneously 14 to 60 days prior to breeding. If packaged with VISTA 5 SQ, refer to carton for complete directions. Annual revaccination is recommended.

Supplied

10-dose, 50-dose



Mastitis Prevention

Your cow production and operation profitability take a direct hit if coliform mastitis takes hold. Vaccinate before it impacts your milk string.

Bovilis[®] J-5

Intended for use in healthy dairy cattle as an aid in the reduction of mastitis due to *Escherichia coli*.

Bovilis[®] J-5

For the vaccination of healthy cattle.

Aids in the reduction of mastitis due to *Escherichia coli*.

Dosage

Shake well and administer a 5 cc dose subcutaneously. Three doses are recommended at four to six week intervals.

Do not vaccinate within two weeks of parturition.

Supplied

50-dose



Scours Prevention

Calf scours – neonatal diarrhea – exerts a costly toll on the livestock industry. While the bacteria, viruses and parasites that cause the disease are a part of livestock production, scours can be prevented. For exceptional protection, turn to vaccines from Merck Animal Health.

Guardian[®]

Provide real-world protection against the viruses often responsible for calf scours as well as the broadest clostridium protection ever brought to market.

Guardian[®]

For the vaccination of healthy cattle.

Aids in the prevention of neonatal calf diarrhea caused by:

- *Escherichia coli pilus* Type K99
- Bovine Group A Serotype G6 rotaviruses
- Enterotoxemia caused by *Clostridium perfringens* Types C and D

Aids in the control of neonatal calf diarrhea caused by:

- Bovine coronavirus

Features:

- The only scours vaccine administered to pregnant cows and heifers that includes both Coronavirus Type 1 and Type 3¹
- Beef Quality Assurance friendly: labeled for subcutaneous administration; other commercially available maternally administered scours vaccines are labeled for intramuscular administration
- Low incidence of injection site reactions (lumps and bumps)

Dosage

2 mL injected subcutaneously three months prior to calving followed by a second 2 mL injection three to six weeks later. For subsequent calvings, revaccinate with a single 2 mL dose five to seven weeks before calving.

Supplied

10-dose, 50-dose

¹Guardian product label.



Bovilis[®] Coronavirus

The only intranasal vaccine that helps prevent calf scours by reducing the enteric disease caused by bovine coronavirus – a major cause of diarrhea in young calves and winter dysentery in dairy cows that has been linked to early onset bovine respiratory disease (BRD).

For the vaccination of healthy calves.

Aids in the prevention of enteric disease caused by bovine coronavirus.

Features:

- Safe for use in calves as young as 1 day old¹
- Efficacy demonstrated in calves 3 days of age and older
- Low-stress route of administration
- Four-day onset of immunity^{2,3}
- Safe for use in colostrum-fed calves¹

Dosage

Administer 2 mL intranasally.

Supplied

10-dose, 50-dose, 25x1-dose

¹Bovilis Coronavirus: safety and field trials.

²Onset of immunity of a modified live bovine coronavirus administered to calves by the intranasal route (product code 19N1.20). Merck Animal Health. January 2016.

³Bovilis Coronavirus: onset of protective immunity presentation.



Pinkeye Prevention

Pinkeye causes pain, stress and weight loss in cattle. If your cattle go blind or develop clouded eyes, your operation's profitability will take an additional hit. Prevent pinkeye before it blindsides your ROI.

20/20 Vision® 7

For the vaccination of healthy cattle.

Aids in the prevention of disease caused by:

- *Clostridium chauvoei* (Blackleg)
- *C. septicum* (Malignant edema)
- *C. novyi* (Black disease)
- *C. sordellii*
- *C. perfringens* Types C and D (Enterotoxemia)
- *Moraxella bovis* (Pinkeye)

Dosage

2 mL injection administered subcutaneously followed by a second 2 mL dose given three to four weeks later.

Supplied

10-dose, 50-dose



Piliguard® Pinkeye-1 Trivalent

For the vaccination of healthy cattle.

Aids in the control of pinkeye associated with infection by *Moraxella bovis* (pinkeye).

Dosage

2 mL administered subcutaneously or intramuscularly into the neck three to six weeks prior to onset of pinkeye season. Annual revaccination is recommended.

Supplied

10-dose, 50-dose





Prevention is the best medicine.

Protect your cattle and profits from the production and monetary cost of preventable illness. Speak with your veterinarian to guard your cattle and profit margins with the help of cattle vaccines from Merck Animal Health.

A comprehensive lineup of protection you can count on is another way Merck Animal Health Works for you.



Good protection is about what you don't see.

Vaccines proven to cause fewer reactions¹⁻⁵ can help you see healthier cattle and higher profits.

With vaccines that won't disrupt productivity, you're going to like what you see. Just one more way Merck Animal Health Works for you.



See how fewer reactions can help your herd at CattleFriendlyVaccines.com.

1. Effects of Vaccination with Vista® 5 L5 SQ or Bovi-Shield GOLD® FP® L5 on Milk Production. 2010.
2. Technical Reference 96-4: Evaluation of Injection-Site Blemishes Using Ultrasonography Following Administration of Two Commercial Multivalent Clostridial Vaccines.
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