1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Rispoval IBR-Marker Live lyophilisate and diluent for suspension for injection for cattle

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 2 ml dose contains:

Active substance:

Freeze-dried pellet:

Bovine Herpes Virus type 1 (BoHV-1), strain Difivac (gE-negative), modified live (attenuated) virus	min. $10^{5.0}$ $CCID_{50}$* max. $10^{7.0}$ $CCID_{50}$*

* $CCID_{50}$ = Cell culture infective dose 50%.

Excipients:

Qualitative composition of excipients and other constituents	Quantitative composition if that information is essential for proper administration of the veterinary medicinal product
Freeze-dried pellet:	
Dextran stabiliser solution	
Minimum essential medium with Earle´s salts	
HEPES 2M solution	
Diluent:	
Water for injections	2 ml

Lyophilisate: slightly coloured freeze-dried pellet.
Diluent: clear, colourless solution.

3. CLINICAL INFORMATION

3.1 Target species

Cattle.

3.2 Indications for use for each target species

For active immunisation of cattle against Infectious Bovine Rhinotracheitis (IBR), to reduce virus shedding and clinical signs including, in female cattle, abortions associated with BoHV-1 infection. A reduction of abortion associated with BoHV-1 infections has been demonstrated during the second trimester of gestation upon challenge 28 days after vaccination. Vaccinated cattle can be differentiated from field virus infected animals due to the marker deletion, unless the cattle were previously vaccinated with a conventional vaccine or infected with field virus.

Onset of immunity: 7 days following a single intranasal administration.
21 days following a single intramuscular administration.

Duration of immunity following vaccination before 3 months of age: after intranasal vaccination of calves aged 2 weeks or older without maternally derived antibodies, immunity lasts until at least 3 months of age, when the animals should be revaccinated via intramuscular injection.
A proportion of young calves may have maternally derived antibodies to BoHV-1, which may affect the immune response to vaccination. Consequently, the protection afforded by the vaccine may not be

complete until the revaccination at 3 months of age. Duration of immunity following vaccination at or after 3 months of age: 6 months.

Additional information on protection from abortion afforded by combined vaccination of Rispoval IBR-Marker Live with Rispoval IBR-Marker Inactivated*: prevention of abortion has been demonstrated during the third trimester of gestation upon BoHV-1 challenge applied 86 days after a single dose booster vaccination using Rispoval IBR-Marker Inactivated*, which was administered 6 months after a single dose primary vaccination by the intramuscular route using Rispoval IBR-Marker Live.

* Where this veterinary medicinal product is authorised.

3.3 Contraindications

None.

3.4 Special warnings

The presence of maternal antibodies can influence the efficacy of the vaccination. Therefore it is recommended to ascertain the immune status of calves before vaccination is started.

Vaccinate healthy animals only.

3.5 Special precautions for use

Special precautions for safe use in the target species:

In some cases, the vaccine virus may be excreted after intranasal administration from vaccinated animals. After intranasal administration of a 10-fold overdose, the vaccine virus was detected for up to 9 days after vaccination. In very young calves and in rare cases, vaccine virus was excreted until day 18 post intramuscular vaccination with a 10-fold overdose. Exceptional transmission of the virus from intranasally-vaccinated animals to non-vaccinated in-contact animals may occur due to the nature of the vaccine even though no verified data available would indicate that spreading of the vaccine virus occurs in a group of animals.
It is recommended to vaccinate all the cattle in the herd.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:

In case of accidental self-injection, seek medical advice immediately and show the package leaflet or the label to the physician.

Special precautions for the protection of the environment:

Not applicable.

3.6 Adverse events

Cattle:

Rare (1 to 10 animals / 10,000 animals treated):	Nasal discharge[1]
Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Injection site swelling[2], Hypersensitivity reaction[3]

[1]Slight transient, serous discharge may occur for up to 7 days following intranasal inoculation.

[2]Transient swelling up to 3 cm which generally subsides within 7 days; when injected intramuscularly.
[3]Vaccinated animals should be observed for approximately 30 minutes following immunisation. If such reactions occur, antiallergics should be administered.

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or its local representative or the national competent authority via the national reporting system. See the package leaflet for respective contact details.

3.7 Use during pregnancy, lactation or lay

Pregnancy and lactation:

Can be used during pregnancy and lactation.

3.8 Interaction with other medicinal products and other forms of interaction

Immunosuppressive substances, i.e. corticosteroids or Bovine Virus Diarrhoea modified live vaccines, should be avoided in a period of 7 days prior to and after vaccination as this may impair the development of the immunity.

Interferon sensitive veterinary medicinal products should not be applied intranasally following 5 days after intranasal vaccination.

No information is available on the safety and efficacy of this vaccine when used with any other veterinary medicinal product. A decision to use this vaccine before or after any other veterinary medicinal product therefore needs to be decided on a case by case basis.

3.9 Administration routes and dosage

Posology:
The dose for cattle, over 2 weeks of age, is 2 ml of the reconstituted vaccine for intranasal inoculation and/or intramuscular injection.

After reconstitution, the suspension should be a colourless clear liquid, which might contain a loose resuspendable sediment.

The vaccination scheme consists of basic immunisation and booster vaccinations.

Basic immunisation:

Calves of 2 weeks to 3 months of age at first vaccination
The first vaccination should be applied intranasally, followed by a second vaccination intramuscularly at 3 months of age.
A proportion of young calves may have maternally derived antibodies to BoHV-1, which may affect the immune response to vaccination. Consequently, the protection afforded by the vaccine may not be complete until the revaccination at 3 months of age. As an extra precaution in situations of high challenge with BoHV-1, maternal antibody positive animals that have been initially vaccinated at around 2 weeks of age may be given an additional vaccination between the first vaccination and vaccination at 3 months of age. This additional vaccination may be given via either intranasal or intramuscular administration and may be given from 3 weeks after the first vaccination.

Cattle at 3 months of age or older at first vaccination
Animals should be given one intramuscular or intranasal vaccination.

Beef cattle and fattening bulls are vaccinated preferably just prior to housing (crowding) or at transfer to new groups, while taking into account the interval needed for the onset of protection following the basic vaccination scheme.

For female cattle for protection against abortion
To prevent abortions associated with BoHV-1, female cattle require a primary course of two intramuscular doses of Rispoval IBR-Marker Live 3-5 weeks apart or alternatively a primary course of a single intramuscular dose of Rispoval IBR-Marker Live followed 6 months later by a single dose booster using Rispoval IBR-Marker Inactivated*. In order to cover the main abortion risk period, it is recommended that the second dose of the primary course of two intramuscular doses of Rispoval IBR-Marker Live or the single dose booster using Rispoval IBR-Marker Inactivated* is administered no later than by the start of the second trimester of each pregnancy.

Cattle at immediate risk of IBR
In the case of known high BoHV-1 infection pressure, the first dose in cattle (including pregnant females) should be administered intranasally in order to stimulate local immunity, followed 3 – 5 weeks later by the second dose administered intramuscularly to complete the primary vaccination course.

Booster vaccinations:
Animals should be given a single dose booster vaccination 6 months after their initial vaccination course. Animals initially vaccinated with Rispoval IBR-Marker Live may be given a single dose booster vaccination with either Rispoval IBR-Marker Live to provide 6 months of protection or Rispoval IBR-Marker Inactivated* to provide a duration of immunity of 12 months of protection. Thereafter, single dose booster vaccinations should be administered every 6 months (if using Rispoval IBR-Marker Live) or every 12 months (if using Rispoval IBR-Marker Inactivated*).

Method of administration:

The freeze-dried pellet should be reconstituted aseptically just prior to use. The vaccine is prepared as follows:

For 10 and 50 dose vials approx. 4 ml of the respective diluent are transferred to the vial containing the freeze-dried pellet and then mixed.

The reconstituted virus fraction is finally transferred back into the respective remaining diluent and mixed well. The veterinary medicinal product is then ready for use.

The needles and syringes used for application of the vaccine must not be sterilised by chemical disinfectants as this may impair the efficacy of the vaccine.

The vaccine is injected aseptically via the intramuscular route (2 ml) or sprayed into the nostrils (1 ml per nostril during aspiration) with the intranasal applicator available from Zoetis. Once resuspended the vaccine remains potent for max. 8 hours when the veterinary medicinal product is withdrawn sterile and refrigerated.

Vaccination schemes summary:

From 2 weeks to 3 months of age

Rispoval IBR-Marker vaccine used			
Primary Vaccination		**Revaccination Intervals**	
First dose (vaccine, route of administration)	**Second dose (vaccine, route of administration)**	**Interval to next booster vaccination (vaccine, route of administration)**	**All subsequent booster vaccinations (vaccine, route of administration)**
2 weeks (Live, intranasal)	3 months (Live, intramuscular)	6 months (Live, intramuscular)	6 months (Live, intramuscular)
2 weeks (Live, intranasal)	3 months (Live, intramuscular)	6 months (Inactivated*, subcutaneous)	12 months (Inactivated*, subcutaneous)

From 3 months of age

Rispoval IBR-Marker vaccine used		
Primary Vaccination (number of doses, route of administration)	**Revaccination Intervals**	
	Interval to first booster vaccination (vaccine, route of administration)	**All subsequent booster vaccinations (vaccine, route of administration)**
Live (one dose, intramuscular or intranasal)	6 months (Live, intramuscular)	6 months (Live, intramuscular)
Live (one dose, intramuscular)	6 months (Inactivated*, subcutaneous)	12 months (Inactivated*, subcutaneous)
Inactivated* (two doses, subcutaneous, with 3-5 week interval)	6 months (Inactivated*, subcutaneous)	6 months (Inactivated*, subcutaneous)

For female cattle for protection against abortion:

Rispoval IBR-Marker vaccine used	
Primary Vaccination (number of doses, route of administration) recommended to be applied no later than by the start of second trimester of pregnancy	**Revaccination**
Live (two doses, intramuscular, with 3-5 weeks interval)	Inactivated* (one dose, subcutaneous) recommended to be applied no later than by the start of the second trimester of each pregnancy
Live (one dose, intramuscular) followed by Inactivated* (one dose, subcutaneous), with 6 months interval	
Inactivated* (two doses, subcutaneous, with 3-5 week interval)	

For vaccination in known high BoHV-1 infection pressure:

Rispoval IBR-Marker vaccine used		
Primary Vaccination (number of doses, route of administration)	**Revaccination Intervals**	
	Interval to first booster vaccination (vaccine, route of administration)	**All subsequent booster vaccinations (vaccine, route of administration)**
Live (one dose, intranasal), followed by Live (one dose, intramuscular) with 3-5 weeks interval	6 months (Live, intramuscular, OR Inactivated*, subcutaneous)	6 months (Live, intramuscular) OR 12 months (Inactivated*, subcutaneous)

* Where this veterinary medicinal product is authorised.

3.10 Symptoms of overdose (and where applicable, emergency procedures and antidotes)

After intranasal administration of a 10-fold overdose, a transient hyperthermia (> 39.5°C) was observed in some calves for up to 3 consecutive days. After intramuscular administration of a 10-fold overdose, a transient hyperthermia (> 39.5°C) was observed in some calves for up to 4 consecutive days. In another study, a transient (one day) slight serous ocular discharge was observed in some calves after intramuscular administration of a 10-fold overdose.
Otherwise, adverse events after administration of an overdose of the vaccine are not different from those observed after the single dose.

3.11 Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance

Not applicable.

3.12 Withdrawal periods

Zero days.

4. IMMUNOLOGICAL INFORMATION

4.1 ATCvet code: QI02AD01

The vaccine induces immunity in cattle against clinical respiratory symptoms caused by the Infectious Bovine Rhinotracheitis (IBR) virus. After a single dose vaccination, a significant reduction of virus shedding duration has been demonstrated upon challenge. After two doses of vaccine, the intensity and duration of clinical symptoms as well as the titre and duration of virus shedding are significantly reduced following infection. As with other vaccines, vaccination may not completely prevent but does reduce risk of infection. The veterinary medicinal product induces in vaccinated cattle antibodies, which are detected in the serum neutralisation test and in conventional ELISA tests. With specific test kits these antibodies can be differentiated - due to the lack of antibodies against gE - from those of field virus infected animals or animals vaccinated with conventional vaccines.

5. PHARMACEUTICAL PARTICULARS

5.1 Major incompatibilities

Do not mix with any other veterinary medicinal product, except diluent supplied for use with the veterinary medicinal product.

5.2 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years.
Shelf life after reconstitution according to directions: 8 hours.

5.3 Special precautions for storage

Store in a refrigerator (2 °C – 8 °C).
Do not freeze.
Protect from light.

5.4 Nature and composition of immediate packaging

1 box with 1 glass vial, type 1, freeze-dried pellet (10 doses) and 1 glass vial, type 1, containing 20 ml (10 doses) diluent, each closed respectively with bromobutyl and chlorobutyl rubber stopper and an aluminium flip-off cap.

1 box with 1 glass vial, type 1, freeze-dried pellet (50 doses) and 1 glass vial, type 1, containing 100 ml (50 doses) diluent, each closed respectively with bromobutyl and chlorobutyl rubber stopper and an aluminium flip-off cap.

Not all pack sizes may be marketed.

5.5 Special precautions for the disposal of unused veterinary medicinal products or waste materials derived from the use of such products

Medicines should not be disposed of via wastewater or household waste.

Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned.

6. NAME OF THE MARKETING AUTHORISATION HOLDER

Zoetis Belgium S.A.

7. MARKETING AUTHORISATION NUMBER(S)

VPA10387/062/001

8. DATE OF FIRST AUTHORISATION

Date of first authorisation: 09/12/2013

9. DATE OF THE LAST REVISION OF THE SUMMARY OF THE PRODUCT CHARACTERISTICS

23/06/2023

10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS

Veterinary medicinal product subject to prescription.

Detailed information on this veterinary medicinal product is available in the Union Product Database (https://medicines.health.europa.eu/veterinary).