

Dobroxine®

Doxycycline 500 mg/g + Bromhexine 50 mg/g

Powder for administration in drinking water/milk for calves.



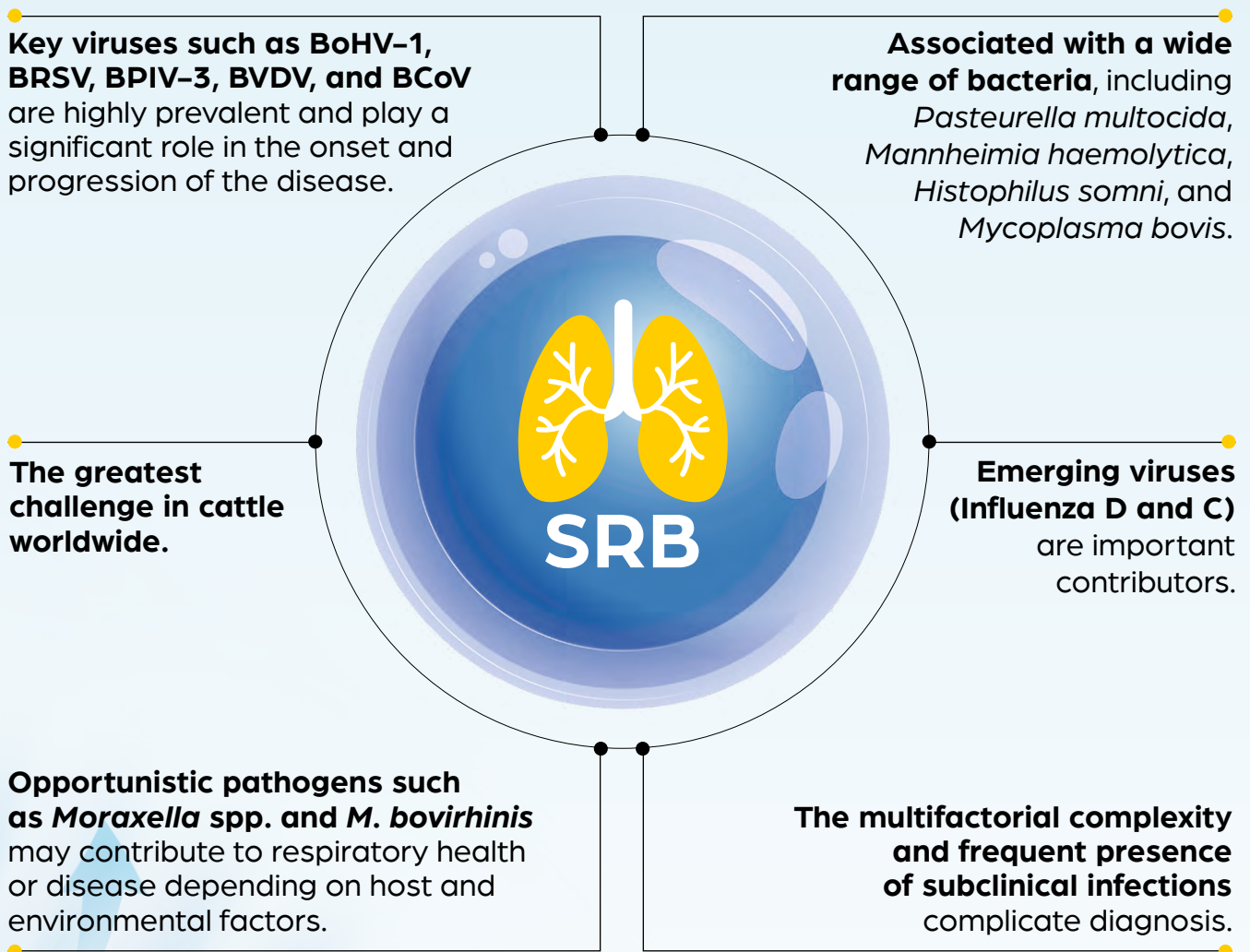
**The smart
combination
against respiratory
challenges.**



ALIVIRA
LABORATORIOS KAREDO S.A.

Bovine Respiratory Disease (BRD):

a complex multifactorial process.⁹



The presence of secretions in the respiratory tract hinders antibiotic action, prolonging the disease and increasing treatment costs.

The smart combination against respiratory challenges

Bromhexine

Is a benzylamine used, alone or in combination with antimicrobials, for the treatment of respiratory conditions when both production and viscosity of tracheobronchial mucus are affected.^{1,4,5}



Expectorant properties.



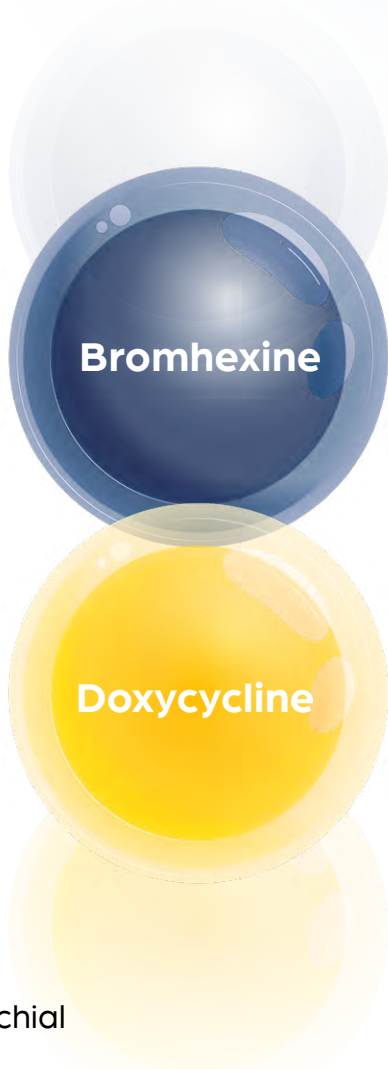
Increases **bronchial secretion** volume.



Reduces tracheobronchial **mucus viscosity**.



Enhances tracheobronchial ciliary **activity**.



Doxycycline

Is a semisynthetic tetracycline derived from oxytetracycline. Doxycycline acts by interfering with bacterial protein synthesis in sensitive species.

It is active against Gram+ and Gram- bacteria. Its antibacterial spectrum includes *Pasteurella multocida* and *Mannheimia haemolytica*.



EMA antimicrobial categorization: D².



70% bioavailability in preruminant calves after oral administration in milk³.

Bromhexine plays a key role in optimizing antimicrobial action

Several studies have shown that coadministration of bromhexine and antibiotics in respiratory conditions has a positive effect on antibiotic penetration.

- Data suggest that bromhexine induces changes in mucus viscosity, resulting in increased antibiotic concentration in the mucus.⁶
- Another study evaluated bromhexine's influence on antibiotic penetration into bronchial secretions, revealing a significant increase in bronchial antibiotic levels when administered together.⁷
- The bromhexine/antibiotic combination is also associated with improved clinical response, with a significant reduction in symptoms.⁸

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Powder for administration in drinking water/milk for calves.

Treatment of respiratory infections caused by *Pasteurella multocida* and *Mannheimia haemolytica* in preruminant calves.

**Dosage
20 mg
of product/kg bw/
day for 4–5 days.**

**Oral
administration
in milk.**

**Stability
in milk:
6 hours**

**Bags of
1kg**



References:

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4. Davies CP, Webster AJ. Deposition and clearance of monodisperse aerosols in the calf lung: effects of particle size and a mucolytic agent (bromhexine). Can J Vet Res. 1987;51(3):306-311.
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Dobroxine 500 mg/g + 50 mg/g Powder for administration in drinking water/milk for calves **Composition:** Each gram contains: Doxycycline 500.0 mg (as doxycycline hyclate 596.0 mg), Bromhexine hydrochloride 50.0 mg. **Target species:** Cattle (preruminant calves). **Indications:** Treatment of respiratory infections caused by *Pasteurella multocida* and *Mannheimia haemolytica*. **Dosage and administration route:** Administration in milk. Preruminant calves: 10 mg doxycycline (hyclate) + 1 mg bromhexine hydrochloride/kg body weight/day for 4–5 days, equivalent to 20 mg of product/kg body weight/day. The concentration of veterinary medicinal product per liter of milk replacer can be calculated using the following formula: mg of veterinary medicinal product per liter of milk replacer = (mg of product/kg body weight/day × average weight (kg) of animals to be treated) / average milk replacer consumption/animal (L). **Withdrawal period:** Cattle (preruminant calves): Meat: 16 days. Not authorized for use in animals whose milk is intended for human consumption. **Shelf life:** Shelf life of the veterinary medicinal product as marketed: 4 years. Shelf life after opening the primary container: 6 months. Shelf life after dissolution in milk according to instructions: 6 hours. **Presentations:** Bags of 200 g and 1 kg. **Marketing authorization holder:** Laboratorios Karizoo, S.A. Veterinary medicinal product subject to veterinary prescription.