

## NUPLURA® PH

### *Mannheimia Haemolytica* Bacterial Extract — Toxoid

For use in healthy cattle, 3 months of age and older, as an aid in the prevention of respiratory disease caused by *M. haemolytica*.

- **Recombinant leukotoxoid technology** — NUPLURA® PH is the first and only cattle vaccine developed in the U.S. market using a combination of outer membrane protein (OMP) and recombinant leukotoxoid technology. NUPLURA PH contains consistent levels of leukotoxoid in every dose to provide a strong immune response.
- **Purified antigen** — NUPLURA PH is not a simple, inactivated whole-cell product like most other bacterins. It contains outer membrane proteins that have been extracted and purified through a proprietary process. The result is a reduction of cellular debris, which allows the immune system to focus entirely on critical bacterial components.
- **Fast onset of immunity** — NUPLURA PH is the only *M. haemolytica* vaccine demonstrated to deliver immunity in as soon as 10 days.<sup>1</sup>
- **High degree of safety** — Demonstrated to be safe for calves as young as 28 days.<sup>2</sup>
- **Smooth** — The unique formulation and recombinant technology allows NUPLURA PH to be gentle on calves, with minimal reactivity post-vaccination as measured by injection site reaction.<sup>2</sup>
- **Convenient** — NUPLURA PH can be used along with Arsenal®, BRD Shield®, Master Guard®, Titanium® or Vira Shield® for comprehensive respiratory disease protection. NUPLURA PH does not require mixing or reconstituting.

## Product Numbers

### NUPLURA PH

- #414 – 20 mL – 10 doses
- #415 – 100 mL – 50 doses

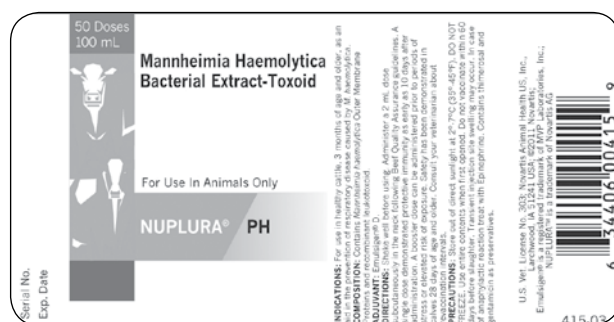


## NUPLURA PH

### ADJUVANT: Emulsigen® D

**DIRECTIONS:** Shake well before using. Administer a 2 mL dose subcutaneously in the neck following Beef Quality Assurance guidelines. A single dose demonstrated protective immunity as early as 10 days after administration. A booster dose can be administered prior to periods of stress or elevated risk of exposure. Safety has been demonstrated in calves 28 days of age and older. Consult your veterinarian about revaccination intervals.

**PRECAUTIONS:** Store out of direct sunlight at 2°–7°C (35°–45°F). DO NOT FREEZE. Use entire contents when first opened. Do not vaccinate within 60 days before slaughter. Transient injection site swelling may occur. In case of anaphylactic reaction treat with Epinephrine. Contains thimerosal and gentamicin as preservatives.



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

<sup>1</sup>Data on file, USDA. Study 08NAHLW8130v.

<sup>2</sup>Data on file, USDA. Study 09NAHLW8156v.

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