



Elanco

**NUPLURA<sup>®</sup> PH**

*Fast. Modern. Effective.*

NUPLURA<sup>®</sup> PH is the one and only *Mannheimia haemolytica* vaccine that has been demonstrated to deliver protective immunity in as soon as 10 days with minimal reaction following vaccination.<sup>1</sup> And, it's safe for calves 28 days or older.<sup>2</sup>

#### Fastest onset of immunity

- Protective immunity as early as 10 days post-vaccination, proven *in vivo* for every batch
- No other *Pasteurella* vaccine has a faster immunity claim
- Quick, strong protection that can be used prior to periods of elevated risk (stress, movement, commingling)

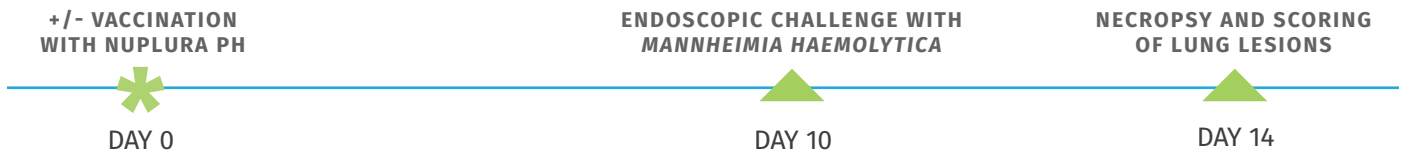
#### Modern technology

- Developed using recombinant technology — a process that results in consistent levels of pure leukotoxin
- Includes purified outer membrane proteins to deliver a strong immune response against *Mannheimia haemolytica* bacteria
- The extraction and purification processing of outer membrane protein reduces the amount of endotoxin
- Reduced endotoxin allows a more targeted immune response to leukotoxin and outer membrane protein

## Effective

NUPLURA PH is tested through an *in vivo* challenge model prior to (lot) release to prove:

- 10-day onset of immunity
- Reduction in lung lesions of at least 40% (demonstrated by mitigated fraction)



### MODERN TECHNOLOGY. FASTER PROTECTION.

	NUPLURA PH	ONE SHOT®	ONCE PMH®	POLY-BAC® B3	PRESPONSE® SQ	PULMOGUARD® PH-M-1
Onset of immunity	As soon as 10 days after administration	No claim granted	No claim granted	No claim granted	No claim granted	No claim granted
Age at which safety demonstrated	Proven safe in calves as young as 28 days	“Considered safe” in cattle of all ages	Not specified	Not specified	Not specified	Not specified
Molecularly advanced leukotoxoids	✓	No	No	No	No	No
Ready to use – no mixing required	✓	No	No	✓	✓	✓
Outer Membrane Proteins (OMP) purified	✓	No	No	No	No	No

**VISIT [WWW.NUPLURA.COM](http://WWW.NUPLURA.COM) OR CONTACT YOUR LOCAL ELANCO REPRESENTATIVE FOR MORE INFORMATION.**

#### References

1. Elanco Animal Health. Data on file.
2. Elanco Animal Health. Data on file.

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

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