

Nobivac NXT
Canine Flu H3N2

# DELIVER NOBIVAC® NXT-LEVEL IMMUNITY

Fight canine influenza virus (CIV) with revolutionary RNA particle technology in a non-adjuvanted, low-volume vaccine





### A novel solution to a prevailing threat

Introducing the next (NXT) generation of protection from Merck Animal Health's line of Nobivac® respiratory vaccines. Nobivac® NXT Canine Flu H3N2 is a groundbreaking new way to safeguard dogs against the ongoing threat of canine flu.

See how Nobivac® continues its legacy of innovation with Nobivac® NXT-level immunity.



#### 2009

First canine flu (H3N8) vaccine with Nobivac® Canine Flu H3N8

#### 2016

First bivalent canine flu vaccine for both H3N2 and H3N8 with Nobivac® Canine Flu Bivalent

#### 2018

The first and only flu vaccine approved for both canine and feline use with Nobivac® Canine Flu H3N2

### NOW

Nobivac NXT

Canine Flu H3N2

### THE NOBIVAC® NXT ADVANTAGE



First and only canine flu vaccine built on RNA particle technology



RNA particles stimulate the immune system to attack the H3N2 virus without the use of adjuvants or live organisms



A low-volume 0.5-mL dose provides a more gentle vaccine experience

Laboratory
surveillance indicates
CIV H3N2 as the
critical strain of
concern.1



# Groundbreaking technology. Exceptional protection.



The first and only line of companion animal vaccines to use RNA particle technology to generate an efficient, comprehensive immune response.

- Smaller dose

  A low-volume 0.5-mL dose for a more gentle vaccine experience
- No extraneous material

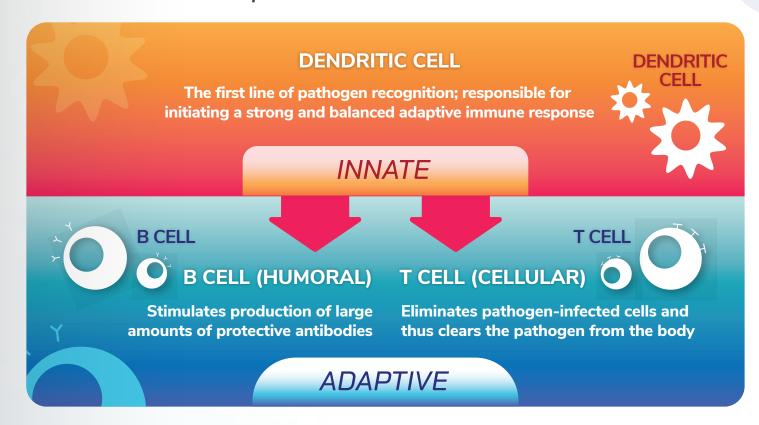
  Nobivac® NXT-level protection in a preservative-free, adjuvant-free, thimerosal-free formulation
- Targeted and efficient

  Delivers the desired viral sequence to dendritic cells for an enhanced, precise immune response
- Safety and efficacy without compromise
  Self-amplification triggers a robust antibody and cellular immune response without the use of an adjuvant or live organisms



# The Nobivac® NXT generation of vaccine technology

A closer look at comprehensive immune activation



### How Nobivac® NXT triggers a comprehensive immune response

Nobivac® NXT vaccines deliver RNA particles to harness the natural ability of the immune system to generate a robust response with no compromise to comfort or safety.





RNA copies exponentially in dendritic cells



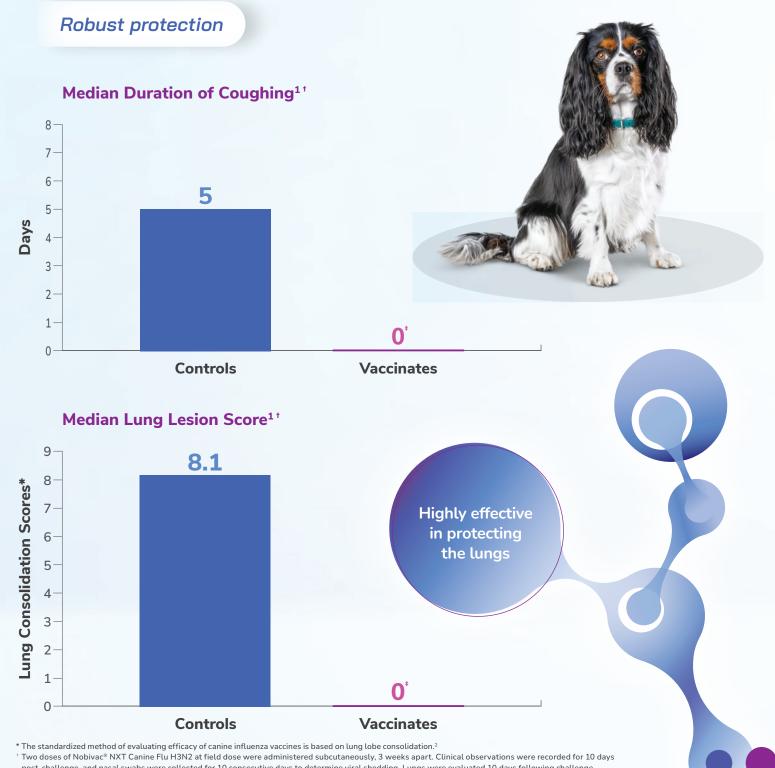
The copies are translated into large amounts of the desired antigen



Antigen stimulates a more robust humoral and cellular immune response

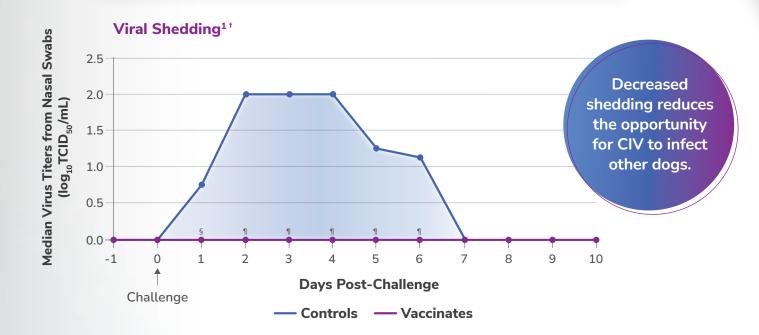
### Uncompromising efficacy

A challenge study involving 8-week-old puppies showed that Nobivac® NXT Canine Flu H3N2 significantly reduces coughing and lung lesion scores\* (P<0.0001).



 $post-challenge, and \, nasal \, swabs \, were \, collected \, for \, 10 \, consecutive \, days \, to \, determine \, viral \, shedding. \, Lungs \, were \, evaluated \, 10 \, days \, following \, challenge.$ 

### Duration and amount of viral shedding significantly reduced<sup>§¶</sup>



### Demonstrated safety under field conditions

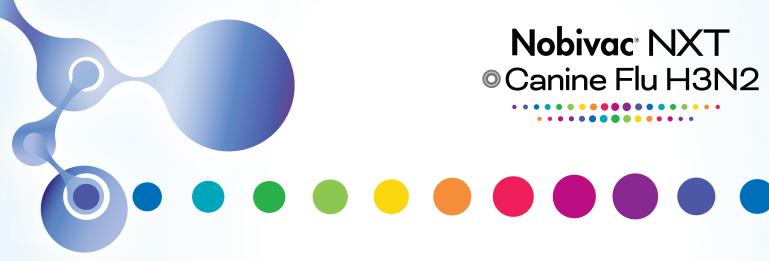
Proven safe across a variety of breeds and ages in a field safety study<sup>1</sup>

- 1,301 doses administered to 654 dogs of various breeds
- Dogs ranged in age from 8 weeks to 15 years
- Lethargy was the most common adverse event (1.6%)



 $<sup>^{\</sup>S}$  Magnitude of viral shedding on Day 1 - P = 0.0001

 $<sup>^{\</sup>P}$  Overall duration of viral shedding and magnitude of viral shedding – P<0.0001



# The next chapter in respiratory protection

- The latest innovation from a leader in respiratory protection
- Nobivac® NXT-generation protection against canine influenza virus H3N2
- Enhances the body's natural processes to induce comprehensive immunity
- A low-volume 0.5-mL dose provides a more gentle vaccine experience
- The ONLY adjuvant-free canine influenza vaccine
- Optimized safety and efficacy for total peace of mind



## Talk to your Merck Animal Health representative to learn more.

Technical Services: 1-800-224-5318 (Monday-Friday, 9:00 AM-7:00 PM ET)

Customer Service: 1-800-521-5767 (Monday-Friday, 9:00 AM-6:00 PM ET)

References: 1. Data on file. Merck Animal Health. 2. Deshpande MS, Jirjis FF, Tubbs AL, et al. Evaluation of the efficacy of a canine influenza virus (H3H8) vaccine in dogs following experimental challenge. Vet Therapeut. 2009;10(3):103-112.

