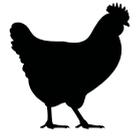


MEFLUVAC™

H9+ND IMMUBOOST

TRANSBOUNDARY
CONTROL



Inactivated trivalent vaccine against LPAI (subtypes H9N2) and Newcastle Disease (GII and GVII) virus

INTRODUCTION

Low pathogenic avian influenza (LPAI) is a contagious, multi-organ systemic disease of poultry leading to high morbidity in poultry¹. The disease is caused by some H9 subtypes of type A influenza virus, family *Orthomyxoviridae*.¹ After mutation these LPAI viruses can become HPAI viruses, usually while they are circulating in poultry flocks.²

Avian influenza virus can spread in the farm by both the fecal–oral route and aerosols, due to the proximity of the birds, fomites can be important in transmission and flies may act as mechanical vectors.²

Vaccination became the primary control measure used to minimize losses.³

On the other hand, the Newcastle Disease Virus (NDV) genotypes I and II primarily represent vaccine strains, while the more virulent NDVs are clustered within genotypes III to X. Intriguingly since the 1990s, genotype VIII expanded across Asia, South Africa, and parts of Europe; while genotype VII has been frequently reported in Europe, China, the Middle East, and South Africa.^{4,5,6,7}

COMPOSITION (before inactivation)

- Inactivated Low Pathogenic Avian Influenza H9N2 subtype, G1-lineage, [A/Chicken/Egypt/FAO-S33/2021] $\geq 8.5 \log_{10} \text{EID}_{50}/\text{dose}$.
- Inactivated Newcastle Disease Virus, Genotype II LaSota [ME/NDV3] $\geq 8.5 \log_{10} \text{EID}_{50}/\text{dose}$.
- Inactivated recombinant Newcastle Disease Virus, Genotype VII [rg NDV1/ME.G7/2017] $\geq 8.5 \log_{10} \text{EID}_{50}/\text{dose}$.

TARGET SPECIES

Chickens.

INDICATIONS

For early immunization of chickens against Low Pathogenic Avian Influenza H9N2 subtype and Newcastle Disease.

VACCINATION PROGRAM

Birds can be vaccinated from the first day of age onwards, as per advice from your poultry veterinarian.

WITHDRAWAL

Zero days.

IMMUNITY

- Onset of immunity: 3 weeks after the first vaccination.
- Duration of immunity: 6 weeks after the last vaccination.

CONSIDERATIONS

- For optimal booster effects, the birds should be primed with live NDV vaccines.
- Do not administer less than the recommended dosage.
- Allow the vaccine to reach room temperature (20–25°C) before use.
- The vaccine may occasionally separate into two layers on storage. This in no way affects its potency, but the vaccine should be shaken vigorously before and during use to ensure good emulsification.

MEFLUVAC™

H9+ND IMMUBOOST

TRANSBOUNDARY
CONTROL



Inactivated trivalent vaccine against LPAI (subtypes H9N2)
and Newcastle Disease (GII and GVII) virus



PRESENTATION

MEFLUVAC™ H9+ND IMMUBOOST is packed and presented in 500 mL (2500 doses) polyethylene terephthalate (PET) bottles.

For further information please contact us:

kemin.biologics@kemin.com

or visit:

kemin.com/eu/en/markets/vaccines



Kemin Industries, Inc. and its group of companies 2024. All rights reserved. ™ Trademark of Kemin Industries, Inc., U.S.A. Certain statements, product labelling and claims may differ by geography or as required by local governmental regulations.

PTP-12508

DOSAGE

The vaccine dose (0.2 mL/bird) should be administered subcutaneously in the lower part of the neck or intramuscularly in the thigh or breast muscles.

ADMINISTRATION

Before use, the vaccine should be shaken well to ensure proper mixing. Sterile injection equipment should be used to avoid contamination. Do not use MEFLUVAC™ H9+ND IMMUBOOST if you notice critical irreversible separation of the emulsion.

- Subcutaneous injection: in the lower part of the neck. The needle should be inserted just under the skin in a direction away from the head and in a straight line with the neck.
- Intramuscular injection: in the breast muscles by inserting the needle with a 45° angle to avoid intraperitoneal injection.

STORAGE PRECAUTIONS

- Store and transport refrigerated (+2°C to +8°C).
- Do not freeze.
- Store in a dry place protected from direct sunlight.
- Do not use this product after the expiry date.
- Shelf life after first opening the bottle: 3 hours.

References

1. Swayne DE, Suarez DL. Highly pathogenic avian influenza. *Rev Sci Tech.* 2000 Aug;19(2):463-82. doi: 10.20506/rst.19.2.1230. PMID: 10935274.
2. The Center for Food Security and Public Health, November 2015, *Avian Influenza Fowl Plague, Grippe Aviaire.*
3. A. Anis, M. AboElkhair, M. Ibrahim, Characterization of highly pathogenic avian influenza H5N8 virus from Egyptian domestic waterfowl in 2017, *Avian Pathol.* (2018), <https://doi.org/10.1080/03079457.2018.1470606>.
4. Abolnik C, Horner RF, Bisschop SP, Parker ME, Romito M, Viljoen GJ. A phylogenetic study of South African Newcastle disease virus strains isolated between 1990 and 2002 suggests epidemiological origins in the Far East. *Arch Virol.* 2004;149:603-619.
5. Herczeg J, Wehmann E, Bragg R, Travassos Dias PM, Hadjiev G, Werner O, Lomniczi B. Two novel genetic groups (VIIb and VIII) responsible for recent Newcastle disease outbreaks in Southern Africa, one (VIIb) of which reached Southern Europe. *Arch Virol.* 1999;144:2087-2099.
6. Ke GM, Liu HJ, Lin MY, Chen JH, Tsai SS, Chang PC. Molecular characterization of Newcastle disease viruses isolated from recent outbreaks in Taiwan. *J Virol Methods.* 2001;97:1-11.
7. Liu H, Wang Z, Wu Y, Zheng D, Sun C, Bi D, Zuo Y, Xu T. Molecular epidemiological analysis of Newcastle disease virus isolated in China in 2005. *J Virol Methods.* 2007;140:206-211.