



A CLASSIC THAT  
NEVER FAILS.  
COUNT ON  
VAKSIMUNE® ND CLONE

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# VAKSIMUNE® ND CLONE

LIVE ATTENUATED VACCINE AGAINST  
NEWCASTLE DISEASE



# VAKSIMUNE® ND CLONE

## Challenges & Our Commitment:

Newcastle Disease (ND) remains a major viral threat in poultry farming due to its high contagion, wide tissue tropism, and severe economic impact. Clinical signs often resemble other respiratory diseases, making diagnosis difficult. With treatment limited to supportive care, and biosecurity alone insufficient and costly, prevention is essential.

Vaccination is the most effective control tool, and live vaccines are key. The Clone strain, a classical genotype selected for safety and stable replication, provides strong, consistent immunity with low post-vaccinal reactions. It stimulates both mucosal and systemic defenses, helping reduce virus shedding and field challenge.

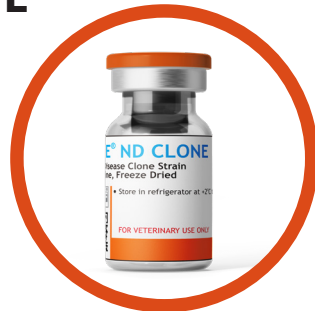
VAKSIMUNE® ND CLONE is a proven, dependable solution – a classic choice poultry farmers can always count on.

## Features:

VAKSIMUNE® ND CLONE is a Freeze dried modified live virus, each dose contains:

**Newcastle Disease Clone Strain** >  $10^{4.5}$  EID<sub>50</sub>

VAKSIMUNE® ND Clone is propagated in embryonated Specific Pathogen Free (SPF) chicken eggs



## Vaccination Strategy for Broiler:

Broiler : 1-4 Days, 11-14 Days

## Vaccination Strategy for Breeder/Layer:

Breeder/Layer : 1-4 Days, 11-14 Days, Repetition every 4 weeks

## Vaccine Administration :

Drinking Water, Eye Drop, Coarse Spray

## VAKSIMUNE® ND CLONE Benefits



### Minimal Post Vaccine Reaction

VAKSIMUNE® ND Clone is designed to provide protection with reduced stress and minimal adverse reactions. It is ideal for young or sensitive birds where low reactivity is critical to flock performance and welfare.



### Genetically Matched for Strong Field Protection

With a 99.45%-99.82% amino acid homology to field isolates such as those found in Iran, VAKSIMUNE® ND Clone is closely matched to circulating Genotype II strains, ensuring relevant and reliable protection in endemic regions.



### Induce Local and Humoral Immunity

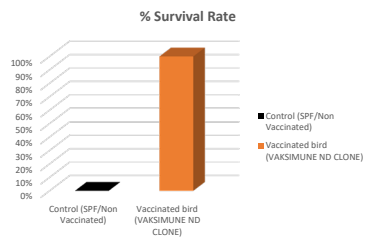
VAKSIMUNE® ND CLONE induces both humoral and cellular immunity. This ensures the production of high-affinity antibodies, establishing a defense and long-term immune memory.

## When to use ND Clone vaccine strain ?

A study by Eidson & Kleven (1980) demonstrated that a clone-selected LaSota strain was more immunogenic than the B1 strain while maintaining a similar pathogenicity index. This indicates a favorable balance between efficacy and safety, making it suitable for both routine and stress-sensitive vaccination programs.

ND Clone strain are specifically selected to enhance immune response and reduce post-vaccinal reactions, making them an improved alternative to the conventional LaSota virus. This makes them ideal for use in flocks where **minimal stress and strong mucosal immunity** are critical—especially in young birds and during periods of high production demand.

VAKSIMUNE ND CLONE shows high amino acid homology (**99.45% – 99.82%**) in the fusion gene when compared with NDV field isolates from Iran, which are also classified as genotype II. This genetic closeness supports its epidemiological relevance and protective match in regions where similar strains circulate.



## Proven Challenge Test

A different group of chickens was isolated in an animal unit and challenged with  $10^{4.0}$  CLD<sub>50</sub> of the velogenic strain of ND virus (Sato strain). Vaccinated group are given vaccine on day 4 and 8. Challenge Test was done on day 42. The SPF control chickens died of ND within 3 to 5 days after infection, while the vaccinated chickens 100% survive until the end of the observation period. The challenge test showed that the vaccines were effective in protecting the chickens from the velogenic strain of ND virus.