

Introduction

Newcastle disease (ND) is a highly contagious viral disease of poultry. ND is characterized by sneezing, coughing, and nervous behavior similar to highly pathogenic influenza virus. Affected birds may show tremors, circling, falling, twisting of the head and neck, or complete paralysis. Mortality reaches 90% in very young birds but adult mortality is very low. Among affected laying hens, egg quantity and quality drop sharply at first but usually return to former levels within four to eight weeks. NDV can cause death even in vaccinated poultry and is characterized by its sudden appearance and rapid spread to nearby flocks. Pathotypes of NDV have been recognized on the base of the virulence, velogenic, mesogenic, and lentogenic. The newly developed RapiGEN NDV Ag test kit is highly specific to almost NDV pathotypes isolated from several birds, to be useful to distinguish from AIV infection.

Specifications

- Principle: immunochromatographic assay Gold conjugate; monoclonal anti-hemagglutinin-neuraminidase of NDV Test line detector; monoclonal anti-hemagglutinin-neuraminidase of NDV
- Detection: Newcastle disease virus
- Specimen: avian cloaca, trachea and ground feces
- Sensitivity: **97.3% (39/40)**
- Specificity: **99.2% (2/263)**
- No cross reaction: AIV, IBV, IBDV, Mycoplasma and E.coli
- Detection limit: 0.125 HAU (Hemagglutination Unit)
- Detection time; 20-30 minutes
- Shelf life: 18 months
- Storage temperature: 2~30°C
- Packing size: 10 multi-device × 3 Tests/Kit and 20 mono-device Tests/Kit
- The test kit shown positive result from genetically different strain isolated from different avian including owl.

Features

- Smart sample collection tube; Simple sample collection and experiment, Protection of human, animal and environment from contamination with putative infectious agents
- Quick screening of NDV in the field or laboratory without additional equipment and technical skill
- High accuracy on variety of NDV strains
- Saving labor and time
- High specificity to other avian virus and bacteria.

Table1. Comparison of Sensitivity Study to NDV RT-PCR

Table1. Comparison of Sensitivity Study to NDV RT-PCR Strain		RapiGEN NDV Ag	RT PCR
Wild	High pathogenic	18/20	20/20
	Middle Pathogenic	5/5	5/5
	Low pathogenic	13/13	13/13
Vaccine	B1	1/1	1/1
	Lasota	1/1	1/1
Sensitivity		97.3% (39/40)	

Table2. Comparison of Specificity Study to NDV RT-PCR

Specimen	RapiGEN AIV+ AIV H5 Ag test	RT-PCR
Trachial	0/88	0/88
Cloacal	0/88	0/88
Ground feces	2/88	0/88
Specificity	99.2% (2/263)	

Procedures

