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TOROIVD®NDV Test Tube Ⅰ

【Catalogue Number】 TS-8063-01

【Packing Information】 8 Tests/Bag

【Components】

Freeze-dried mixture Reverse transcriptase, RNase Inhibitor, the primer-probe sets of NP and IC gene,and IC DNA in the 0.2 mL 8-Strips qPCR tube.

【About NDV】

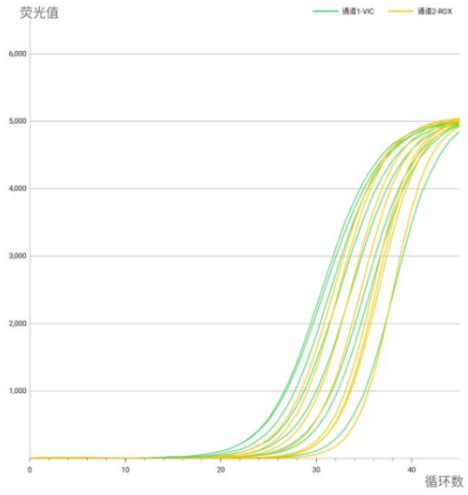
Newcastle disease (ND) is caused by virulent strains of avian paramyxovirus type 1 (APMV-1) of the genus Avulavirus belonging to the family Paramyxoviridae. There are ten serotypes of avian paramyxoviruses designated APMV-I to APMV-10, ND virus (NDV) has been designated APMV-1. ND virus (NDV) has been shown to be able to infect over 200 species of birds, but the severity of disease produced varies with both host and strain of virus. Even APMV-1 strains of low virulence may induce severe respiratory disease when exacerbated by the presence of other organisms or by adverse environmental conditions. Realtime PCR is an excellent, highly sensitive, specific and rapid technique for NDV detection and is very useful for screening and confirmation of suspected cases under a wide range of circumstances.

【Test Principle】

The test tube is based on in vitro RT-qPCR combining fluorescent probing. The primer-probe sets of NP gene was from China National Standard(DB45/T 1011-2014) [1],and were found to be highly specific for NDV. The probes were attached by fluorophores at the 5'end as reporter with VIC for NP Gene, and quencher at 3' end respectively. The test tube has internal control DNA and primer-probe sets,and the probes with fluorophores ROX attached at 5' end as reporter. During the RT-qPCR procedures, the DNA polymerase cleaves the probe at the 5' end and separates the reporter dye from the quencher dye when the probes hybridize to the target DNA. This cleavage results in the fluorescent signal generated by the cleaved reporter dye, which is monitored by the real-time PCR detection system. Measuring the fluorescence intensities during Real Time PCR allows the qualitative detection of NDV in specimens. The internal control is used to monitor the whole procedures including reagents , operation and qPCR cycler , to avoid false negative results.

【Results Interpretation】

Yellow-Plot-ROX：IC monitored RT-qPCR assay Green Plot-VIC：NP Gene of NDV



A	A1	A2	A3	A4	A5	A6	A7	A8
样本	ND	疫苗	3	4	5	6	7	8
VIC	24.50	24.40	25.56	27.90	33.33	30.31	29.63	26.58
ROX	26.43	27.26	28.52	31.46	34.02	31.97	31.92	29.76

B	B1	B2	B3	B4	B5	B6	B7	B8
样本	1	2	3	4	5	6	7	8
VIC								
ROX								

-If the IC -ROX is negative (No Cq or Cq > 40), the RT-qPCR assay run is invalid. Retest is needed.

-If the IC -ROX is positive (Cq ≤40), the RT-qPCR assay run is valid. The results are explained as follow:

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1. If the NP Gene-VIC is negative（No Cq or Cq > 40）,The result is negative of NDV.
2. If the NP Gene-VIC is positive（15 < Cq <35）,The result is positive of NDV.
3. If the NP Gene-VIC is positive（ Cq <15 or 35 < Cq< 40）, Retest is needed. If 1or 2 of 2 repeats can amplify successfully with any Cq value of VIC，the result is positive of NDV. If both of 2 repeats are no Cq value,the result is negative of NDV.

【Storage】

Store the test tube at 2-8℃ in a dry environment for 24 months.

After opening, the remaining test tubes should still be sealed in a dry environment.

It is not recommended to use moisture absorbing test tube.

【References】

[1] Detection of chicken New city disease virus and infectious bronchitis virus by double fluorescent quantitative reverse transcriptase polymerase chain reaction, China National Standard, DB45/T 1011-2014.