Microzone Product Datasheet

Product code: AVDX-IBV-100 Lot Number:

Avian GEN Dx - Infectious Bronchitis Virus (IBV) GI-23 RT-qPCR Detection kit

P. Code	Size in 100 Rxn	Component	Description	Lot Number	Expiry
MM-IBV-1	1 vial	2X MegaMix IBV Mastermix (Lyophilised)	Hot Start Taq, Reverse Transcriptase & RNase Inhibitor in optimised buffer and lyophilised format.		
LYORB-1	1 x 1 mL	MasterMix Reconstitution Buffer	Reconstitution Buffer for re-hydration of 2X MegaMix IBV Mastermix.		
IBV-DM-0.5	1 x 500 µL	IBV Detection Mix (Lyophilised)	Primers and Probe for Infectious Bronchitis Virus detection.		
IBV-PC-0.1	1 x 100 µL	IBV Positive Control	Synthetic DNA containing sequence of IBV.		
5JWA-1	1 x 1 mL	Just Water (Molecular Grade Water)	Aliquoted, quality controlled, nuclease-free, molecular grade water.		
ROX-0.05	1 x 50 µL	25 µM ROX Reference Dye	25 µM ROX Reference Dye		

Applications

- Routine detection and surveillance of IBV GI-23 circulation
- Support of disease control and vaccination strategies

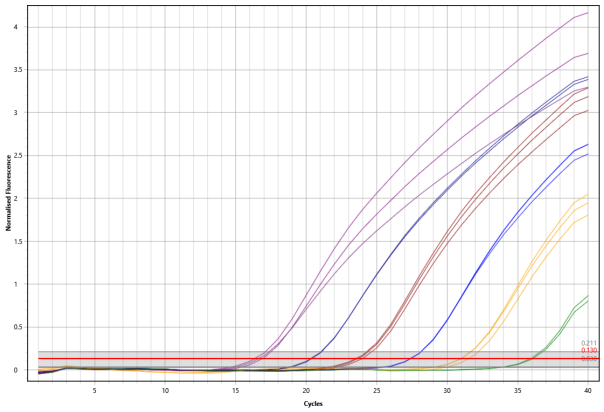
Product Description

Infectious Bronchitis Virus (IBV) is a highly contagious, positive-sense, single-stranded RNA avian coronavirus that affects the respiratory, renal and reproductive systems of poultry. The GI-23 lineage, also known as Variant 2, is associated with widespread outbreaks, reduced productivity and significant economic losses.

The Avian GEN Dx – IBV GI-23 RT-qPCR Detection Kit is designed for sensitive and specific detection of the IBV GI-23 lineage, supporting surveillance and monitoring of this important variant. The assay uses GI-23-specific primers and probe targeting the S1 region of the spike gene.

The kit contains all components required for RT-qPCR, including a lyophilised mastermix with Hot Start Taq DNA Polymerase, Reverse Transcriptase and RNase Inhibitor, an IBV Positive Control and GI-23 Detection Mix. It is compatible with real-time PCR instruments capable of detecting FAM-labelled probes.

Key Features



Avian GEN Dx - Infectious Bronchitis Virus (IBV) RT-qPCR Detection kit demonstrates excellent reproducibility and accuracy across a wide dynamic range. RT-qPCR amplification of spike protein (SP1) gene from six 10-fold dilutions of synthetic IBV Positive Control. Mic qPCR Cycler (BMS, Upper Coomera - Australia).

Protocol

- Reconstitute the 2X MegaMix IBV Mastermix (Lyophilised) by adding 1 mL of Reconstitution Buffer and let it re-hydrate for 30 minutes.
- Reconstitute the IBV Detection Mix (Lyophilised) by adding 500 µL of Just Water and let it re-hydrate for 30 minutes.
- Thaw all reagents completely and mix well before use.
- Prepare a meta mastermix as described in the table below:

Components	Per Test
2X MegaMix IBV Mastermix	10 µL
Infectious Bronchitis Virus (IBV) Detection Mix	5 µL
Total Volume	**15 µL**

Add 5 µL of Sample and 15 µL meta mastermix in the PCR tube.

For Negative Control: 5 µL Just Water

For Positive Control: 5 µL IBV Positive Control

Thermocycling

Transfer the reactions to the thermal cycler and set as follows:

Step	Cycles	Temperature	Time
Reverse Transcription	1	50°C	15 min
Initial Denaturation	1	95°C	2 min
PCR Amplification and Signal Detection	40	95°C	15 sec
		60°C	30 sec

Channel Setting	
Infectious Bronchitis Virus (IBV)	FAM

Optional ROX Addition to mastermix: For low-ROX instruments, add ROX to a final concentration of 50 nM (0.04 µL of 25 µM ROX per reaction). For high-ROX instruments, use a final concentration of 500 nM (0.4 µL per reaction). Refer to the instrument manufacturer's instructions to confirm the required ROX concentration.

Follow the Instructions of Use (IFU) manual for a detailed guide on the assay principle and interpretation of the results. *For research use only*

Product Handling

Storage

To ensure the quality of the product until the expiry date keep at the recommended storage temperature and limit exposure to light.

Contamination Control

To prevent erroneous results ensure work environment is free of contamination by cleaning your workstation and equipment with a DNA decontaminant daily, wear gloves, use sterile tubes and filter pipette tips.

Simple | Effective | Efficient

Version 2.03

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