

# ViroReal® Typing Kit PCV2 a, b, d

Order No.: DVET002

Unit: 100 reactions

For veterinary use only



### Kit contents:

- Separate detection assays for PCV2a, PCV2b, PCV2d
- High-resolution melt DNA master mix containing a DNA polymerase for hot-start PCR, dNTPs, a nucleic acid dye, an internal reference based on ROX™ dye and buffer components
- Separate positive controls for PCV2a, PCV2b, PCV2d
- Nuclease-free water

### Background:

Porcine circovirus type 2 (PCV2) is a member of the family *Circoviridae*, genus *Circovirus* and is an icosahedral, non-enveloped DNA virus with a single-stranded ambisense circular genome.

PCV2 infection with postweaning multisystemic wasting syndrome (PMWS) occurs all over the world. There is evidence that genetic diversity is affecting the virulence of PCV2. At the intraspecific level, two major PCV2 groups (PCV2a and PCV2b) have been initially defined, followed by a third genotype named PCV2c and a fourth group, named PCV2d. The ORF2 sequences facilitate differentiation of the genotypes PCV2a, PCV2b and PCV2d.

### Description:

ViroReal® Typing Kit PCV2 a, b, d is a real-time PCR assay followed by a melt curve step, containing three PCR primer sets for the detection of porcine circovirus type 2 (PCV2) DNA.

ViroReal® Typing Kit PCV2 a, b, d detects the capsid gene of porcine circovirus type 2 (PCV2) a, b, d. The test is based on phylogenetic analysis and the definition of published genotype-specific marker positions for PCV2 genotypes, published by Franzo and colleagues (2015). Amplification curves and specific melting curves for PCV2 a, b and d indicate the amplification of genotype specific DNA.

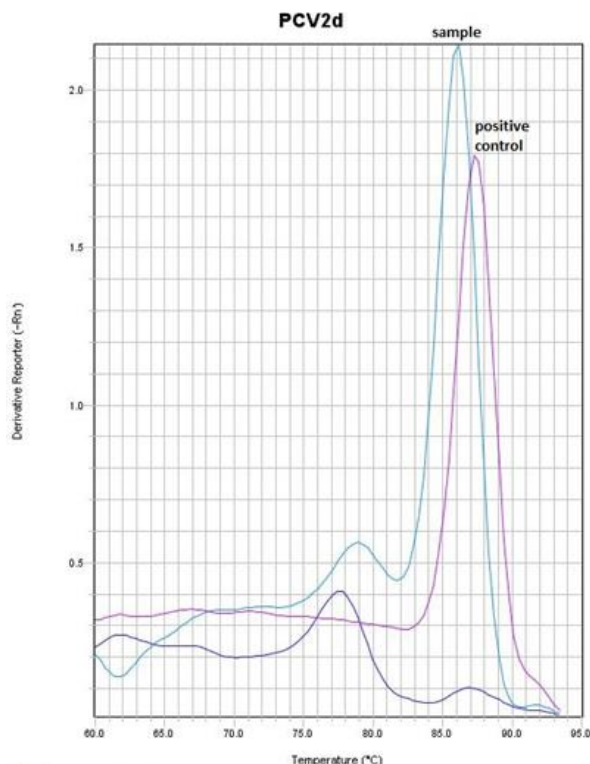
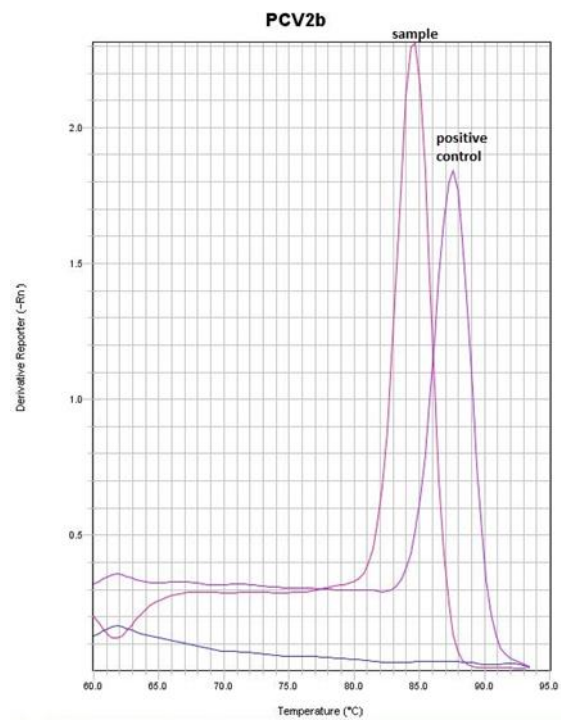
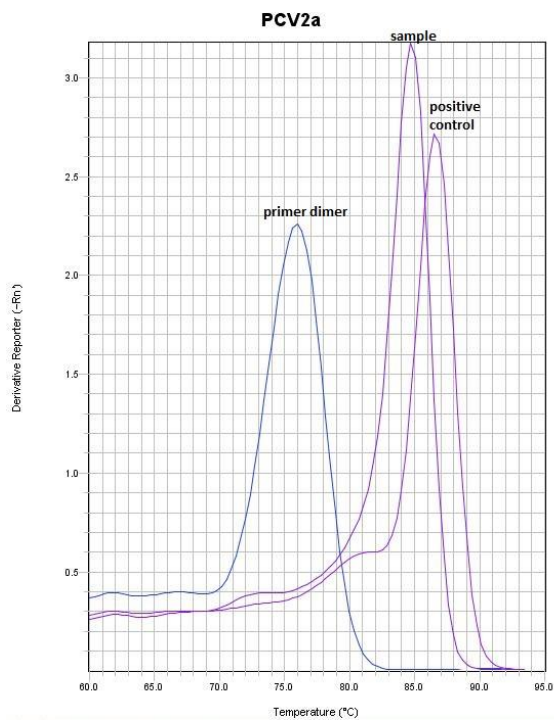
**PCR-platforms:** This test is based on an intercalating dye using real-time PCR and was developed and validated for the Applied Biosystems® 7500 (Fast) instrument (Thermo Fisher Scientific), but is also suitable for other real-time PCR instruments. This test allows the rapid typing of PCV2 a, b, d from DNA samples.

**Sensitivity and specificity:** ViroReal® Typing Kit PCV2 a, b, d has been designed for genotyping purposes, thus only strong PCV2 positive samples should be subjected to testing. Analytical sensitivity of PCV2 a, b, d is about 1000 target copies/PCR reaction. ViroReal® Typing Kit PCV2 a, b, d is specific for porcine circovirus type 2 a, b, d (no cross-reaction with PCV1 or PCV3).

### References:

G. Franzo et al. Revisiting the taxonomical classification of Porcine Circovirus type 2 (PCV2): still a real challenge. *Virology Journal* (2015) 12:131.

## Interpretation of melt curve data (Applied Biosystems® 7500: 515 nm)



### PCV2a

Specific melt curve of PCV2a-positive sample and positive control, NTC shows primer dimers

### PCV2b

Specific melt curve of PCV2b-positive sample and positive control, no primer dimer formation

### PCV2d

Specific melt curve of PCV2d-positive sample and positive control, weak primer dimer formation

### Please note:

For analysis of PCR results gained with ViroReal® Typing Kit PCV2 a, b, d, check amplification plots and melt curves. The specific amplification and melting curve of a sample needs to be interpreted in context of the Ct/Cp and Tm [°C] values of the negative (NTC) and positive control.

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