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BIOREBA

Validation report

DAS-ELISA CYDV-RPV

Article No.: 140677 (CYDV-RPV Complete kit 96) / 140675 (CYDV-RPV Complete kit 480) / 140672 (CYDV-RPV Complete kit 960)

General information:

Target Pathogen	CYDV-RPV (Cereal yellow dwarf virus-RPV / *Polerovirus* CYDVRPV / Previously: Barley yellow dwarf virus-RPV)
Genus	*Polerovirus*
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal (coat & conjugate) antibodies developed against a CYDV-RPV isolate from Mexico.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "General".
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized CYDV-RPV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf Transmission by vectors (*Rhopalosiphum padi*).
Tested species infected	*Hordeum vulgare* (Barley)

Specificity:

Analytical Specificity	92.59%
Number of tested samples from target organism (True Positives)	25
Diagnostic Specificity	92.59%
Number of tested samples non-target organism (True Negatives)	62
Detected isolates / geographic regions (Inclusivity)	CYDV-RPV 020207 (Switzerland, Barley) CYDV-RPV 290409 (Switzerland, Barley) CYDV-RPV 010610 (Switzerland, Barley) CYDV-RPV 080311 (Switzerland, Barley) CYDV-RPV 240412 (Switzerland, Barley) CYDV-RPV 260314 (Switzerland, Barley) BYDV Toluca-2021 (Mexico, Barley) BYDV El Batan 2021 (Mexico, Barley)
Cross reaction with (Exclusivity)	BYDV-GAV P3F2 (Ireland, Barley) BYDV-GAV/PAS P4D1 (Ireland, Barley) Cross-reaction with other BYDV- and CYDV-strains cannot be excluded
No cross reaction tested with (Exclusivity)	BYDV-B (Barley yellow dwarf virus-B) BYDV-F (Barley yellow dwarf virus-F) CMV (Cucumber mosaic virus) GLRaV-2 (Grapevine leafroll-associated virus 2)

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	PLRV (Potato leafroll virus) PMTV (Potato mop-top virus) TYMV (Turnip yellow mosaic virus) Xfr (*Xanthomonas fragariae*)
No matrix effect observed with (Selectivity)	*Hordeum vulgare* (Barley)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10^{-3} dilution of infected tissue (pathogen titer unknown).
Sensitivity on host matrix	CYDV-RPV on leaves of barley: 1:1'250 dilution Pathogen titer unknown
Other sensitivity characteristics	-

Validation:

Internal validation	1987, 1999, 2012
External validation	2024: Byrne, S., et al. "The first survey using high-throughput sequencing of cereal and barley yellow dwarf viruses in Irish spring and winter barley crops." *Irish Journal of Agricultural and Food Research* 63.1 (2024): 1-16.
Reproducibility	100%
Repeatability	100%
Validation information	Internally, the reagents have been validated with the BIOREBA isolate collection, composed of various samples with diverse plant host range, collected within the last 40 years.

Validation release Date:
October 30th, 2026

QC manager:



Version: 1 – 30.10.2026.

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