Validation report

DAS-ELISA TRSV

Article No.: 152277 (TRSV Complete kit 96) / 152275 (TRSV Complete kit 480) / 152272 (TRSV Complete kit 960)

General information:

Target Pathogen	TRSV (Tobacco Ringspot virus)
Genus	*Nepovirus*
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against a TRSV isolate from grapevine (Coating antibody) or blueberry (Conjugate antibody).
Sampling	Grapevine samples: 1:10 (w/v) in extraction buffer "grapevine". Other samples: 1:20 (w/v) in extraction buffer "general". Detection in young leaves, phloem tissue are good sources for testing. Uneven distribution is possible, therefore conscious, and careful sampling are important.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized TRSV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf
Tested species infected	*Chenopodium amaranticolor* (Gosefoots) *Nicotiana Benthamiana* (Tobacco) *Nicotiana Clevelandii* (Tobacco) *Nicotiana Occidentalis* (Tobbaco) *Nicotiana tabacum "Xanthi"* (Tobacco) *Nicotiana White burley* (Tobacco) *Pyrus communis* (Pear) *Solenostemon scutellarioides* (Variegated nettle) *Vaccinium myrtillus* (Blueberry) *Vitis vinifera* (Grapevine)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	32
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	57
Detected isolates / geographic regions (Inclusivity)	TRSV 1191 (Switzerland, Pear) TRSV 1191 (Switzerland, Tobacco) TRSV 1191 (Switzerland, Gosefoots) TRSV 1051 (Switzerland, Tobacco) TRSV (Switzerland, Variegated nettle) TRSV Blueberry-1 (USA, Blueberry) TRSV Blueberry-3 (USA, Blueberry)

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	TRSV Grape-3 (USA, Grapevine) TRSV Grape-4 (USA, Grapevine) TRSV Grape-5 (USA, Grapevine)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	ArMV (Arabis mosaic virus) ASGV (Apple stem grooving virus) ASPV (Apple stem pitting virus) CbMV (Calibrachoa mottle virus) ErLV (Erysimum latent virus) GFLV (Grapevine fanleaf virus) LYSV (Leek yellow stripe virus) PeAMV (Petunia asteroid mosaic virus) PLRV (Potato leafroll virus) RBDV (Raspberry bushy dwarf virus) ToRSV (Tomato ringspot virus)
No matrix effect observed with (Selectivity)	*Cucurbita pepo (Squash)* *Cucurbita pepo subsp. giromontiina* (Zucchini) *Cucumis sativus* (Cucumber) *Fragaria ananassa* (Strawberry) *Geranium* spp. (Geranium) *Malus domestica* (Apple) *Nicotiana benthamiana* (Tobacco) *Prunus armeniaca* (Apricot) *Prunus avium* (Cherry) *Prunus domestica* subsp. *domestica* (Prune) *Prunus persica* (Peach) *Pyrus communis* (Pear) *Rubus fruticosus* (Blackberry) *Solanum lyopersicum* (Tomato) *Vaccinium myrtillus* (Blueberry) *Viola odorata* (Violet) *Vitis vinifera* (Grapevine)

Sensitivity:

Analytical Sensitivity / LoD	n/a
Sensitivity on host matrix	100%
Other sensitivity characteristics	-

Validation:

Internal validation	2017
External validation	2018: USA (13 samples)
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:
May, 26th, 2023

QC manager:

Version: 1 – 26.05.2023

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