

Validation report

DAS-ELISA ToRSV-Ch

Article No.: 151377 (ToRSV-Ch Complete kit 96) / 151378 (ToRSV-Ch Grapev. Complete kit 96) / 151375 (ToRSV-Ch Complete kit 480) / 151376 (ToRSV-Ch Grapev. Complete kit 480) / 151372 (ToRSV-Ch Complete kit 960) / 151373 (ToRSV-Ch Grapev. Complete kit 960)

General information:

Target Pathogen	ToRSV-Ch (Tomato ringspot virus-Chickadee strain / Nepovirus lycopersici Chickadee strain)
Genus	<i>Nepovirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against a ToRSV isolate from apple in the US. The antibodies are specific to the Chickadee (Ch) and grape yellow vein (GYV) strains.
Sampling	<u>Grapevine:</u> Samples: 1:10 (w/v) in extraction buffer "Grapevine". Leaves from young shoots and juicy bark early in the growing season and phloem scrapings from mature canes in dormancy. <u>Other plants:</u> Samples: 1:20 (w/v) in extraction buffer "General". Concentration has strong variation and conscious sample collection is important. Peach: below-ground portion of the stem is best source.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized ToRSV-Ch infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, canes, phloem Transmission by nematodes. Seed and mechanical transmission possible.
Tested species infected	<i>Nicotiana Benthamiana</i> (Tobacco) <i>Nicotiana Clevelandii</i> (Tobacco) <i>Nicotiana Occidentalis</i> (Tobacco) <i>Nicotiana tabacum</i> "Xanthi" (Tobacco) <i>Prunus persica</i> (Peach) <i>Solanum lycopersicum</i> (Tomato) <i>Vitis vinifera</i> (Grapevine)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	24
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	51

Detected isolates / geographic regions (Inclusivity)	ToRSV-ch 905 (Switzerland, Tobacco) ToRSV-ch 905 (Switzerland, Tomato) ToRSV-ch 905 (Switzerland, Peach)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	ToRSV (Tomato ringspot virus, non-Chickadee strains) TBRV (Tomato black ring virus) TRSV (Tobacco ringspot virus)
No matrix effect observed with (Selectivity)	<i>Malus domestica</i> (Apple) <i>Nicotiana Benthamiana</i> (Tobacco) <i>Nicotiana Clevelandii</i> (Tobacco) <i>Nicotiana Occidentalis</i> (Tobacco) <i>Nicotiana tabacum</i> "Xanthi" (Tobacco) <i>Pelargonium</i> (Pelargonium) <i>Prunus persica</i> (Peach) <i>Solanum lycopersicum</i> (Tomato) <i>Vitis vinifera</i> (Grapevine)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁻³ dilution of infected tissue (pathogen titer unknown).
Sensitivity on host matrix	ToRSV-ch on leaves of tobacco: 1:2'500 dilution Pathogen titer unknown
Other sensitivity characteristics	-

Validation:

Internal validation	2000
External validation	-
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:
August 20th, 2026

QC manager:



Version: 1 – 20.08.2026.