

Validation report

DAS-ELISA TNV

Article No.: 152477 (TNV Complete kit 96) / 152475 (TNV Complete kit 480) / 152472 (TNV Complete kit 960)

General information:

Target Pathogen	TNV (Tobacco necrosis virus) / Alphanecrovirus nicotianae (TNV A) and Betanecrovirus nicotianae (TNV D)
Genus	<i>Alphanecrovirus</i> / <i>Betanecrovirus</i> (<i>Tombusviridae</i>)
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against TNV isolates from tomato and dahlia.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "General". Potato tubers: 1:10 to 1:20 (w/v) in extraction buffer "Bulbs & Tubers".
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized TNV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf Transmission by zoospores (<i>Olpidium brassicae</i>).
Tested species infected	<i>Nicotiana Clevelandii</i> (Tobacco) <i>Nicotiana tabacum</i> "Xanthi" (Tobacco)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	21
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	78
Detected isolates / geographic regions (Inclusivity)	TNV 1303 (Switzerland, Tobacco) TNV 060898 (Switzerland, Tobacco) TNV 080408 (Switzerland, Tobacco)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	BCMV (Bean common mosaic virus) BCMN (Bean common mosaic necrosis virus) CMV (Cucumber mosaic virus) CGMMV (Cucumber green mottle mosaic virus) Rs (<i>Ralstonia Solanacearum</i>) SMV (Soybean mosaic virus) TMV (Tobacco mosaic virus) ZYMV (Zucchini yellow mosaic virus)
No matrix effect observed with (Selectivity)	<i>Cucumis sativus</i> (Cucumber) <i>Nicotiana Clevelandii</i> (Tobacco) <i>Nicotiana tabacum</i> "Xanthi" (Tobacco)

	<i>Phaseolus vulgaris</i> (Bean) <i>Solanum lycopersicum</i> (Tomato) <i>Solanum tuberosum</i> (Potato)
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Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁻⁴ dilution of infected tissue (pathogen titer unknown).
Sensitivity on host matrix	TNV on leaves of tobacco: 1:31'250 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:
July 10th, 2026

QC manager:



Version: 1 – 10.07.2026.