

Validation report

DAS-ELISA GFLV

Article No.: 120478 (GFLV Complete kit 96) / 120476 (GFLV Complete kit 480) / 120473 (GFLV Complete kit 960)

General information:

Target Pathogen	GFLV (Grapevine fanleaf virus)
Genus	<i>Nepovirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Poly- (coat) and monoclonal (conjugate) antibodies developed against isolates of GFLV from Central Europe and Canada.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "general" Grapevine leaf samples: 1:10 (w/v) in extraction buffer "Grapevine"
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized GFLV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, sprouting buds, bark (phloem)
Tested species infected	<i>Vitis vinifera</i> (Grapevine) <i>Chenopodium quinoa</i> (Quinoa)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	83
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	>100
Detected isolates / geographic regions (Inclusivity)	837 1984 Fully (Switzerland, Quinoa) 1128 Domaine de Seguret (France, Grapevine) Ermitage 10556-8 (Switzerland, Grapevine) Chardonnay (Switzerland, Grapevine) 8087 Chardonnay (Switzerland, Grapevine) 8673-75 Chardonnay (Switzerland, Grapevine) K94 (France, Grapevine) HG 222 (France, Grapevine) T61 (France, Grapevine) 8637 (Switzerland, Grapevine) 7784 Rebe de Diolly (Switzerland, Grapevine) A02 (Germany, Grapevine) A03 (Germany, Grapevine) A12 (Germany, Grapevine) 11074 Chasselas (Switzerland, Grapevine) 8646 Gamay (Switzerland, Grapevine) 1129 (Spain, Quinoa) 10419 (Switzerland, Grapevine)

	10409 (Switzerland, Grapevine) 8640 (Switzerland, Grapevine)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	ASGV (Apple stem grooving virus) ASPV (Apple stem pitting virus) ArMV (Arabis mosaic virus) BYDV-B (Barley yellow dwarf virus-B) GCLV (Garlic common latent virus) GFkV (Grapevine fleck virus) GLRaV-1 (Grapevine leafroll-associated virus 1) GLRaV-3 (Grapevine leafroll-associated virus 3) GLRaV-1+3 (Grapevine leafroll-associated virus 1+3) GLRaV-4 strain 6 (Grapevine leafroll-associated virus 4 strain 6) OYDV (Onion yellow dwarf virus) PNRSV (Prunus necrotic ringspot virus) SMYEPV (Strawberry mild yellow edge potexvirus) SqMV (Squash mosaic virus) ToANV (Tomato apex necrosis virus)
No matrix effect observed with (Selectivity)	<i>Vitis vinifera</i> (Grapevine) <i>Chenopodium quinoa</i> (Quinoa)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁻³ - 10 ⁻⁴ dilution of infected tissue (pathogen titer unknown)
Sensitivity on host matrix	GFLV on leaves of grapevine: 1:31'250 dilution GFLV on canes of grapevine: 1:1'250 dilution Pathogen titer unknown
Other sensitivity characteristics	-

Validation:

Internal validation	2009
External validation	PT every 2 years (Germany)
Reproducibility	100%
Repeatability	100%
Validation information	Every two years BIOREBA participates with GFLV reagents on an external proficiency test (PT). Internally, the reagents have been validated with the BIOREBA isolate collection.

Validation release Date:
September, 07th, 2022

QC manager:



Version: 2 – 01.09.2023 - Information about sensitivity on host matrix and limit of detection (LoD) added.