

## Validation report

## DAS-ELISA GLRaV-1

Article No.: 120178 (GLRaV-1 Complete kit 96) / 120176 (GLRaV-1 Complete kit 480) / 120173 (GLRaV-1 Complete kit 960)

## General information:

Target Pathogen	GLRaV-1 (Grapevine leafroll-associated virus 1)
Genus	<i>Ampelovirus</i>
Method	DAS-ELISA

## Technical information:

Antibodies	Complementary monoclonal antibodies developed against different GLRaV-1 isolates
Sampling	Leaf samples: 1:10 (w/v) in extraction buffer "Grapevine" Bark scrapings: 1:10 (w/v) in extraction buffer "Grapevine"
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized GLRaV-1 infected plant extracts
Working volume	200 µl / well

## Host matrix:

Tested plant material	Leaf (petiole, vein), bark (phloem) from dormant canes
Tested species infected	<i>Vitis vinifera</i> (Grapevine)

## Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	>100
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	>100
Detected isolates / geographic regions (Inclusivity)	Pinot noir 9331 (Switzerland, Grapevine) Y 273 (France, Grapevine) Y 174 (France, Grapevine) #12 (France, Grapevine) #155 (France, Grapevine) Cornalin 10699 (Switzerland, Grapevine) Räuschling 7710 (Switzerland, Grapevine) Räuschling 8722 (Switzerland, Grapevine) 9987 Arinto (Grapevine) V29 (France, Grapevine) 102 (France, Grapevine) GRdL (Switzerland, Grapevine) Liverdun (Switzerland, Grapevine) GRdL 4048/4049 (Switzerland, Grapevine) Lemberger 4/4/5 (Germany, Grapevine) Riesling 11/1 (Germany, Grapevine) Malvoisie 9232 L49 (Switzerland, Grapevine) 96-29, Lambrusco (Italy, Grapevine) Y318, Ishouhali (Iran, Grapevine)

	Y233, Houedi (Syria, Grapevine) A94, Servant (France, Grapevine) 95-177 (Italy, Grapevine) Z179, Furmint (Germany, Grapevine) Weissburgunder 1/7/3 (Germany, Grapevine) Humagne Rouge (Grapevine)
<b>Cross reaction with (Exclusivity)</b>	None known
<b>No cross reaction tested with (Exclusivity)</b>	GFLV (Grapevine fanleaf virus) ArMV (Arabidopsis mosaic virus) GLRaV-2 (Grapevine leafroll-associated virus 2) GLRaV-3 (Grapevine leafroll-associated virus 3) GLRaV-4 (Grapevine leafroll-associated virus 4) GFkV (Grapevine fleck virus) GVA (Grapevine virus A)
<b>No matrix effect observed with (Selectivity)</b>	<i>Vitis vinifera</i> (Grapevine)

**Sensitivity:**

<b>Diagnostic Sensitivity</b>	100%
<b>Analytical Sensitivity / LoD</b>	10 <sup>-2</sup> dilution of infected tissue (pathogen titer unknown)
<b>Sensitivity on host matrix</b>	GLRaV-1 on leaves of grapevine: 1:250 dilution GLRaV-1 on canes of grapevine: 1:250 dilution Pathogen titer unknown
<b>Other sensitivity characteristics</b>	-

**Validation:**

<b>Internal validation</b>	2002
<b>External validation</b>	PT every 2 years
<b>Reproducibility</b>	100%
<b>Repeatability</b>	100%
<b>Validation information</b>	Every two years BIOREBA participates with GLRaV-1 reagents on an external proficiency test (PT). Internally, the reagents have been validated with the BIOREBA isolate collection composed of various different samples collected within the last 40 years.

Validation report release Date:  
July, 13<sup>th</sup>, 2022

QC manager:



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