Product Information: DAS-ELISA

Grapevine leafroll associated virus 2 (GLRaV-2)

Grapevine leafroll-associated virus 2 (GLRaV-2), formerly named GLRaV IIb (1, 4), is one out of several viruses in the family *Closteroviridae* associated with leafroll diseases occurring on grapevine cultivars grown in Europe, North- and South-America, Africa, Asia and Japan.

Specificity and sampling instruction

The broad-spectrum reagents contain complementary polyclonal and monoclonal antibodies to different virus isolates. Antibodies used for the coating were made against an isolate of the leafroll diseased Chasselas clone 8/22 (monoclonal) and a PV20 lineage isolate (#1295) from a leafroll diseased vine (polyclonal) (4, 5). Antibodies used for the conjugate were made against an isolate from a Pinot Noir grapevine in Oregon (polyclonal; V. Dolja, personal communication) and a PV20 lineage isolate (#1295) from a leafroll diseased vine (monoclonal) (5) as well as the monoclonal antibody against Chasselas clone 8/22 as used in the coating.

The DAS-ELISA reagents specifically detect GLRaV-2, including isolates from the Red Globe (RG), BD, PN, and PV20 lineages (6).

The concentration of GLRaV-2 in grapevine tissue varies considerably; especially the "Red Globe" can be extremely low – sometimes too low for detection by ELISA. Thus, conscious sample collection is very important: mature leaves and bark (phloem) scrapings from dormant canes are good tissue sources for testing (4). Well-developed «middle-aged» leaves, veins and petioles contain usually more detectable virus than the blades. For testing grapevine, a special extraction buffer «Grapevine» (Art. No. 110123) (3, modified) is used at a ratio of 1:10 (w/v).

The product was developed in cooperation with Agroscope, the Swiss centre of excellence for research in the agriculture and food sector; and the Oregon State University, Department of Botany and Plant Pathology, Corvallis, OR, USA.

Information on the antibodies

Coating IgG: monoclonal and polyclonal; conjugate: monoclonal and polyclonal

References

(1) Boscia, D., Greif, C., Gugerli, P., Martelli, G.P., Walter, B., and Gonsalves, D. 1995. Vitis 34:171-175.

(2) Clark, M.F., and Adams, A. N. 1977. J. gen. Virol. 34:475-483.

(3) Gugerli, P. 1986. In H.U. Bergmeyer: Methods of Enz. Analysis. Vol. XI. pp. 474-481.

(4) Gugerli, P., and Ramel, M.-E. 1993. Extended abstracts 11th Meeting ICVG, Montreux, Switzerland, 6-9 September 1993 (Federal Agricultural Reserch Station of Changins, CH-1260 Nyon, Switzerland), 23-24.

(5) Besse, S., Balmelli, C., Hofstetter, V., Gugerli, P. 2009. Extended abstracts 16th Meeting ICVG, Dijon, France, 31 August-4 September 2009.

(6) Jarugula, S., Alabi, O., Martin, R., and Naidu, R. 2010. Phytopathology. 100 (7): 698-707.

Ordering Information

BIOREBA offers the following formats:

Individual ELISA reagents for 96, 480 or 960 assays: IgG and/or conjugate for the working volume of 200 µl/test/well.
Reagent sets for 480 or 960 assays: IgG and conjugate, positive and negative controls, and microtiter plates (F-96) for a working volume of 200 µl/test/well.
Complete kits for 96, 480 or 960 assays: All reagents, controls, microtiter plates (F-96), buffers, and substrate necessary for a working volume of 200 µl/test/well.
ELISA buffers, equipment for sample preparation and disposables are also available.
For all Art. No. please refer to our product catalogue or our homepage www.bioreba.com and for prices and further information on any other product from BIOREBA, please contact your local distributor or our office in Switzerland.

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Adaptations from last version: Addition of monoclonal antibody to conjugate.

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