

## Product Information: DAS-ELISA

# Grapevine virus A (GVA)

### Synonym: Vitivirus alphavitis

GVA (a Vitivirus) (4) is associated with the Kober Stem Grooving disease – a component of the Rugose wood (RW) complex of grapevine. RW is a major “disorder” affecting grapevines (*Vitis* species). Also involved in RW are Grapevine virus B (GVB) and Grapevine rupestris stem pitting associated virus (GR-SPaV). GVA causes longitudinal grooves on the stems of the rootstock Kober 5BB and is responsible for considerable crop losses (3). The virus is frequently found in association with other viruses (1). Disease expression (severity) is influenced by other viruses including Grapevine leafroll-associated viruses.

### Specificity and sampling instructions

The reagents consist of polyclonal antibodies raised to recombinant virus coat protein as well as of monoclonal antibodies developed against CH-781 isolate (P. Gugerli, *pers. communication*). The DAS-ELISA reagents cover a broad-spectrum of GVA, comprising different serotypes (3; and P. Gugerli, *pers. communication*). A cross-reaction with some Grapevine virus B isolates (at high concentration) may occur. The concentration of GVA in grapevine tissue varies considerably, both as far as time of the season and uneven distribution in tissue concerns. Well developed leaves from the lower part of the plant late in the growing season and bark (phloem) scrapings (cortical scrapings) from mature canes during dormancy are optimal for ELISA testing. For testing grapevine, a special extraction buffer «Grapevine» (Art. No. 110123) (2, modified) is used at a ratio of 1:10 (w/v); for other plants, the extraction buffer «General» (Art. No. 110120) is used at a ratio of 1:20 (w/v).

The product was developed in cooperation with Agroscope, the Swiss centre of excellence for research in the agriculture and food sector; and University of Applied Sciences and Arts Northwestern Switzerland (FHNW), Muttensz.

### Information on the antibodies

Coating IgG: polyclonal; conjugate: poly- and monolonal

### References

- (1) Conti, M., Milne, R., Luisoni, E., and Boccardo, G. 1980. *Phytopathology* 70:394-399.
- (2) Gugerli, P. 1986. In H.U. Bergmeyer: *Methods of Enz. Analysis*. Vol. XI, pp. 474-481.
- (3) Gugerli, P., Rosciglione, B., Brugger J.J., Bonnard, S., Ramel, M.E., and Tremea, F. *Proceedings of the 10th Meeting of ICVG, Volos 1990*: 59, 1991.
- (4) Martelli, G.P., Conti, M. and Minafra, A. 2001. *Descriptions of plant viruses*. No. 383. CMI/AAB. 11 pp.

### Ordering Information

**BIOREBA offers the following formats:**

**Individual ELISA reagents** for 100, 500 or 1000 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](http://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: added revised taxonomy of ICTV and assays of individual ELISA reagents.