

## Product Information: DAS-ELISA

# Tobacco streak virus (TSV)

### Synonym: Ilarvirus TSV

TSV (2) has a wide host range and occurs worldwide. The virus is unstable in plant extracts but can be transmitted mechanically to a number of hosts and is transmitted through pollen, seed, and by thrips. The virus causes e.g. systemic necrotic lines bordering veins in tobacco, mottling in dahlia and in cotton, malformation in tomato, stunting of asparagus, vein yellowing in rose, and necrotic shock in strawberry.

### Specificity and sampling instruction

The polyclonal antibodies used for coating were made against an isolate from 'Willamette' red raspberry, the monoclonals used for the conjugate from the same source (R. R. Martin, personal communication). These DAS-ELISA reagents (1) detect TSV from different plant species in many families. The reagents react also with Strawberry necrotic shock virus (SNSV), formerly categorized as strains of TSV (4), e.g. in strawberry and raspberry. Furthermore, Black raspberry latent virus (BRLV) that was previously thought to be a strain of TSV, is now considered a synonym of SNSV and is also detected with the TSV reagents. On the other hand, these reagents do not react with clover and bean red node strains of TSV. In the Northern hemisphere, the best time for sampling of *Rubus* species is from mid-May through August; the best tissue source is leaves (3). Samples are homogenised 1:20 (w/v) in extraction buffer «General» (Art. No. 110120).

The product was developed in cooperation with the USDA-ARS Horticultural Crops Research Laboratory, Corvallis, OR, USA.

### Information on the antibodies

Coating IgG: polyclonal; conjugate: monoclonal

### References

- (1) Clark, M.F., and Adams, A. N. 1977. J. gen. Virol. 34:475-483.
- (2) Fulton, R.W. 1985. Descriptions of plant viruses. No. 307. CMI/AAB. 5 pp.
- (3) Martin, R.R. 1998. Raspberry viruses in Oregon, Washington and British Columbia. Acta Hortic. 471:72-76.
- (4) Tzanetakis, I.E., Mackey, I.C., and Martin, R.R. Proc. Xth IS on Small Fruit Virus Diseases. Ed. R.R. Martin. Acta Hort 656, ISHS, 2004, pp. 27-31.

### 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.