Product Information: DAS-ELISA

Cauliflower mosaic virus (CaMV)

Cauliflower mosaic virus (*Caulimovirus tessellobrassicae*, other scientific names are: Brassica virus 3, Broccoli mosaic virus, Cabbage mosaic virus, Cabbage virus B) is distributed worldwide and induces mosaic, mottling, chlorosis and stunting of many cruciferous crop plants and ornamental species, particularly the various cultivars of *Brassica campestris* and *B. oleracea*. These include cabbage, cauliflower, broccoli, brussels sprouts, turnip, horseradish, Chinese cabbage, mustard, radish and various weeds. Chinese cabbage is particularly susceptible to CaMV. Plants can be stunted. Internal necrotic spotting in storage cabbage has been attributed to CaMV infection. The virus is transmitted by many aphid species.

Specificity and sampling instruction

The reagents were made against a Czech CaMV isolate, multiplied on Chinese cabbage (*Brassica pekinensis*), cv. Nozaki and react specifically with CaMV (3) in DAS-ELISA (1). Isolates from different host plants, e.g. from winter and spring rape, mustards, turnips, and cauliflower, are quite uniform regarding their virulence (2) and serological detection. All isolates of CaMV tested so far have been detected. Main affected crops are different species of Brassica. The concentration of the virus in plants is generally low and their particles are embedded in inclusion bodies. **It is recommended to homogenize samples 1:100 (w/v) in extraction buffer «Caulimo»** (see composition next below). This special extraction buffer helps releasing virus particles and significantly increases activity in DAS-ELISA.

The product was developed in cooperation with the Institute of Plant Molecular Biology, Ceske Budejovice, Czech Republic.

Information on the antibodies

Coating IgG: polyclonal; conjugate: polyclonal

References

(1) Clark, M.F., and Adams, A.N. 1977. J. gen. Virol. 34:475-483.
(2) Spak, J. 1989. Ochr. Rostl., 25 (3):177-184.
(3) Spak, J. 1989. Ochr. Rostl., 25 (4):241-247.

«Caulimo» buffer

The extraction buffer «Caulimo» is no longer provided by BIOREBA. Nevertheless, you can find below the composition and buffer preparation recommended.

Composition of the «Caulimo» extraction buffer (1x)

for 1000 ml, in dist. water (pH 7.4 adjusted with HCl)

TRIS	2.40 g
NaCl	8.00 g
KCl	0.20 g
Tween 20	0.50 g
Triton X-100	5.00 g
PVP	10.00 g
BSA	10.00 g
NaN_3	0.20 g
Urea	60.00 g
*Egg albumin (ovalbumin)	10.0 g

* to be added just before use

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«Caulimo» buffer preparation

Add all substances except ovalbumin and fill up to 1000 ml with distilled water. This buffer is stable for 1 month at 4°C.

Just before use, add 10 g ovalbumin per liter. First dissolve 10 g ovalbumin in about 20 ml of buffer and then make up to a total of 1000 ml with the remaining buffer (or at equal ratio for other volumes).

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.

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.