

## Triplex RNA PCR

- Beet Necrotic Yellow Vein Virus
- Beet Soil-borne Virus
- Beet Virus Q



Beet necrotic yellow vein virus (**BNYVV**) infects several members of the species *Beta vulgaris* and is the causal agent of Rhizomania, the most severe disease of sugar beet. Two viruses probably additionally associated with Rhizomania on sugar beet are Beet soil-borne virus (**BSBV**) and Beet virus Q (**BVQ**).

<b>Family:</b>	Benyvirus (BNYVV) Pomovirus (BSBV, BVQ)
<b>Distribution:</b>	widespread
<b>Host range:</b>	Chenopodiaceae
<b>Transmission:</b>	<i>Polymyxa betae</i>
<b>Symptoms:</b>	rhizomania, stunting, wilting, yellowing of leaves



Our **One-Tube One-Step Triplex RNA PCR** allows **simultaneous detection and discrimination** of all three viruses in one reaction with **a high sensitivity and specificity**. The complete reaction kits contain all components to perform the RNA-PCR reaction.

- M: DNA Ladder
- 1-2: RNA from BNYVV-infected leaf
- 3-4: RNA from BSBV-infected leaf
- 5-6: RNA from BVQ-infected leaf
- 7-8: RNA from BNYVV-, BSBV- and BVQ-infected leaves

### Further Literature

- o Meunier, A. et al. (2003). Multiplex reverse transcription-PCR for simultaneous detection of Beet necrotic yellow vein virus, Beet soilborne virus, and Beet virus Q and their vector *Polymyxa betae* Keskin on sugar beet. *Applied and Environmental Microbiology*, 69(4), 2356-2360.
- o Yilmaz, N. D. K. et al. (2016). The widespread occurrences of Beet soil borne virus and RNA-5 containing Beet necrotic yellow vein virus isolates in sugar beet production areas in Turkey. *European Journal of Plant Pathology*, 144(2), 443-455.
- o Farzadfar, S. et al. (2005). First report of beet virus Q on sugar beet in Iran. *Plant disease*, 89(12), 1359-1359.

### Order Information

09211C/100	BNYVV/BSBV/BVQ Virus Triplex RNA PCR complete reaction kit	100 reactions
09211PC	Positive PCR Control BNYVV/BSBV/BVQ Virus	1 vial (10 reactions)
09211NC	Negative PCR Control BNYVV/BSBV/BVQ Virus	1 vial (10 reactions)

**For more information contact us or visit our web-site: [www.loewe.info.com](http://www.loewe.info.com)**