

PCR macroarray



Diagnostic kit for multiplex detection of eight potato pathogens (7 viruses and 1 viroid in one single reaction)

The PCR macroarray potato virus kit is a diagnostic method for the detection of eight potato viral pathogens: PVA, PVM, PVS, PVX, PVY (O- and N-type), PLRV, PMTV and PSTVd in one single reaction. The complete kit includes macroarray strips, all reagents needed to extract RNA and to perform the test. It is optimized for pools of up to 10 dormant tuber samples. Due to multiplexing, it is cost effective and easy to use. The clearly visible color change of the hybridization positions enables convenient result evaluation by eye. To perform a test, less than 5 hours are required.

The PCR macroarray potato virus kits are validated for potato leaf and tuber samples (peel, stolon and sprouts). Dormant tubers can be pooled for rapid extractions. There are two kit sizes available for 96 and 192 tests (See next page). Both can be used for single samples and for pooled samples of up to 10 tubers .

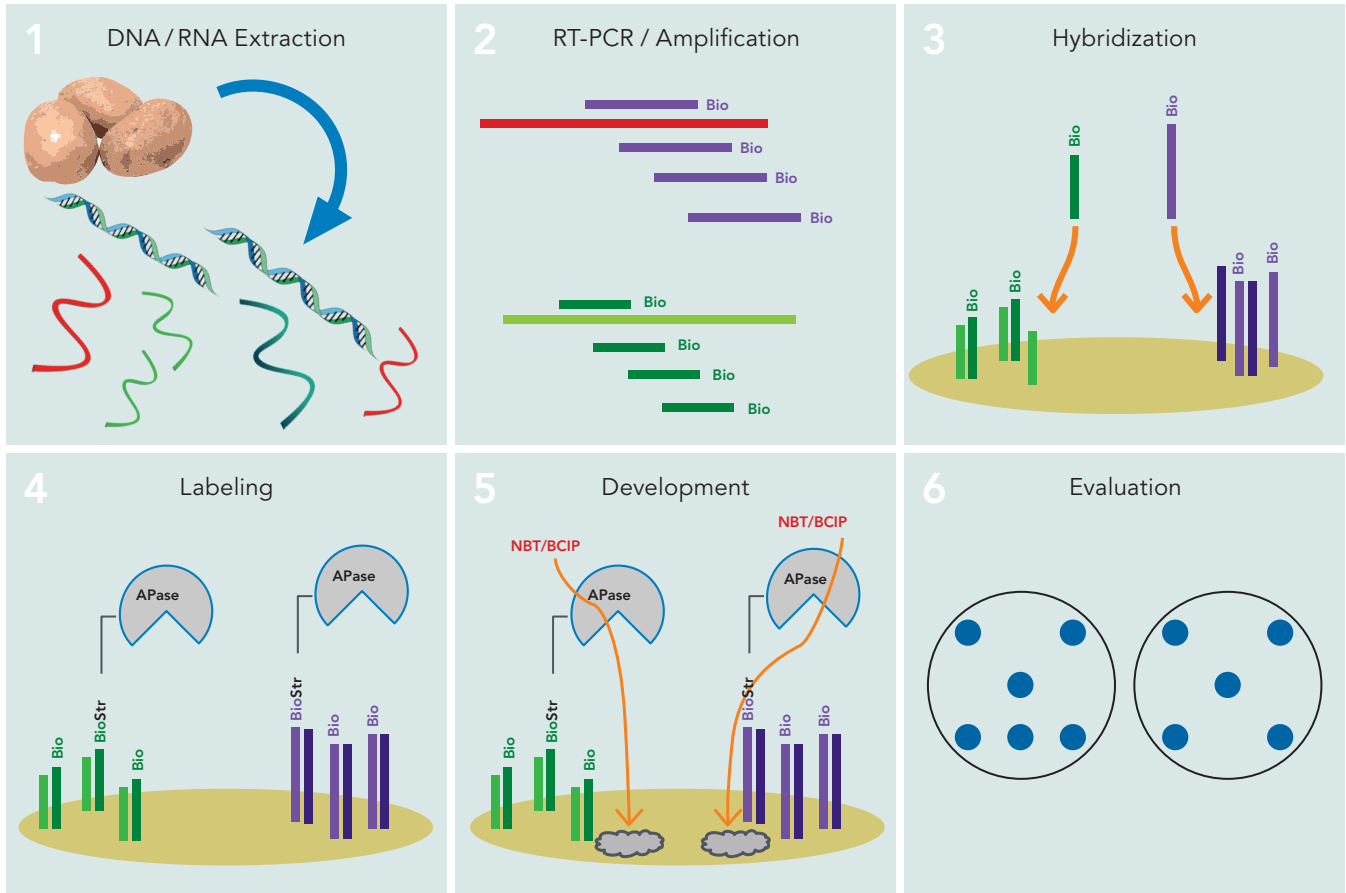
The characteristics of the PCR macroarray kit are:

- Contains all reagents needed including RNA extraction set
- Optimized for pools of up to 10 potato samples
- Suitable for dormant tubers and leaves
- Validated and accredited method according to ISO/IEC 17025
- Cost effective
- Easy to use
- Convenient evaluation of results



The six main working steps of the potato PCR macroarray

Nucleic acid extraction (1), amplification of pathogen RNAs with specific primers (labeled with biotin) (2), hybridization of the amplified cDNAs on the macroarray (3), labeling of the positive samples with alkaline phosphatase (conjugated with streptavidin) (4), colorimetric reaction with NBT/BCIP as substrate (5) and evaluation of the results (6).



Product	Art. No.	No. of reactions
PCR macroarray potato virus kit 96 / 10x	820032	96
PCR macroarray potato virus kit 192 / 10x	820026	192
GT100-2A Thermo Shaker	910030	2 x 96

qPCR PLRV/PVY and qPCR PVA/PVM



qPCR set and kit for the detection of potato viruses

The qPCR sets enable the simultaneous detection (multiplex) of potato virus Y (PVY; all strains) and potato leafroll virus (PLRV) or PVA (potato virus A) and PVM (potato virus M) respectively with real time PCR.

Suitable tissues for the source of viral RNA are potato leaves and tubers (peel, stolon, sprouts). It is highly recommended to use the BIOREBA "Potato DNA/RNA rapid extraction" (included in the qPCR kits) for the extraction of RNA. The qPCR for the detection of PLRV/PVY/IC and PVA/PVM/IC was developed and validated in collaboration with Agroscope, the Swiss centre of excellence for research in the agriculture and food sector.

There are two set sizes available for 96 and for 192 samples and there are four kit sizes available for pools of 10 or up to 25 potato samples and for 96 or 192 extractions respectively.

qPCR GRBV



qPCR set for the detection of grapevine red blotch virus (GRBV)

The qPCR set enables the simultaneous detection (multiplex) of Grapevine red blotch virus (GRBV) and a *Vitis vinifera* host gene control (IC) with real-time PCR.

Suitable tissue sources of viral DNA are grapevine leaves or wood scrapings (phloem). BIOREBA recommends to homogenize samples using the BIOREBA homogenizer system HOMEX and BIOREBA extraction bags Universal, and to follow a CTAB buffer-based method for DNA extraction.

The qPCR for the detection of GRBV was developed in collaboration with Agroscope, the Swiss center of excellence for research in the agriculture and food sectors.

There are two set sizes available for 96 and 192 samples.

Art. No.	Product	No. of reactions	Amount of samples (potatoes)
839600	qPCR PLRV/PVY set 96 includes: <ul style="list-style-type: none"> • Taq Master Mix • RT Master Mix • Primers/Probes/IC Mix_PLRV/PVY • Nuclease free water 	96	
839200	qPCR PLRV/PVY set 192 includes: <ul style="list-style-type: none"> • Taq Master Mix • RT Master Mix • Primers/Probes/IC Mix_PLRV/PVY • Nuclease free water 	192	
839610	qPCR PLRV/PVY kit 96/10 includes: <ul style="list-style-type: none"> • qPCR PLRV/PVY set 96 • Potato DNA/RNA rapid extraction set 10x for 96 extractions and a pool of 10 potatoes 	96	10
839625	qPCR PLRV/PVY kit 96/25 includes: <ul style="list-style-type: none"> • qPCR PLRV/PVY set 96 • Potato DNA/RNA rapid extraction set 25x for 96 extractions and a pool of 25 potatoes 	96	25

Art. No.	Product	No. of reactions	Amount of samples (potatoes)
839210	qPCR PLRV/PVY kit 192/10 includes: <ul style="list-style-type: none"> • qPCR PLRV/PVY set 192 • Potato DNA/RNA rapid extraction set 10x for 192 extractions and a pool of 10 potatoes 	192	10
839225	qPCR PLRV/PVY kit 192/25 includes: <ul style="list-style-type: none"> • qPCR PLRV/PVY set 192 • Potato DNA/RNA rapid extraction set 25x for 192 extractions and a pool of 25 potatoes 	192	25
849600	qPCR PVA/PVM set 96 includes: <ul style="list-style-type: none"> • Taq Master Mix • RT Master Mix • Primers/Probes/IC Mix_PVA/PVM/IC • Nuclease free water 	96	
849200	qPCR PVA/PVM set 192 includes: <ul style="list-style-type: none"> • Taq Master Mix • RT Master Mix • Primers/Probes/IC Mix_PVA/PVM/IC • Nuclease free water 	192	
849610	qPCR PVA/PVM kit 96/10 includes: <ul style="list-style-type: none"> • qPCR PVA/PVM set 96 • Potato DNA/RNA rapid extraction set 10x for 96 extractions and a pool of 10 potatoes 	96	10
849625	qPCR PVA/PVM kit 96/25 includes: <ul style="list-style-type: none"> • qPCR PVA/PVM set 96 • Potato DNA/RNA rapid extraction set 25x for 96 extractions and a pool of 25 potatoes 	96	25
849210	qPCR PVA/PVM kit 192/10 includes: <ul style="list-style-type: none"> • qPCR PVA/PVM set 192 • Potato DNA/RNA rapid extraction set 10x for 192 extractions and a pool of 10 potatoes 	192	10
849225	qPCR PVA/PVM kit 192/25 includes: <ul style="list-style-type: none"> • qPCR PVA/PVM set 192 • Potato DNA/RNA rapid extraction set 25x for 192 extractions and a pool of 25 potatoes 	192	25
879600	qPCR GRBV set 96 includes: <ul style="list-style-type: none"> • Taq Probe Master Mix • Primers/Probes Mix GRBV/IC • Nuclease free water 	96	
879200	qPCR GRBV set 192 includes: <ul style="list-style-type: none"> • Taq Probe Master Mix • Primers/Probes Mix GRBV/IC • Nuclease free water 	192	