

Table S1. Efficiency of carlavirus elimination from PCR-positive transformant lines of naturally-infected potato cultivars

Cultivar (virus infection before transformation)	Line #	Construct used for transformation	Virus detection by ELISA								
			Before planting in the soil			Two months after planting in the soil			Four months after planting in the soil		
			PVS	PVM	PVY	PVS	PVM	PVY	PVS	PVM	PVY
Albinka (PVM + PVY)	parent	-	-	+	+	-	+	+	-	+	+
	39	S-25K-AS	-	+	+	-	-	+	-	-	+
	43	S-25K-AS	-	-	+	-	-	+	-	-	+
	46	S-25K-AS	-	-	+	-	-	+	-	-	+
	47	S-25K-AS	-	-	+	-	-	+	-	-	+
	48	S-25K-AS	-	-	+	-	-	+	-	-	+
	74	S-25K-AS	-	+	+	-	-	+	-	-	+
	159	S-25K-AS	-	-	+	-	-	+	-	-	+
Dunyasha (PVM)	218	S-25K-AS	-	+	+	-	+	+	-	+	+
	parent	-	-	+	-	-	+	-	-	+	-
	44	S-25K-AS	-	-	-	-	-	-	-	-	-
	61	S-25K-AS	-	+	-	-	-	-	-	-	-
	62	S-25K-AS	-	+	-	-	+	-	-	+	-
	65	S-25K-AS	-	+	-	-	+	-	-	+	-
	67	S-25K-AS	-	+	-	-	-	-	-	-	-
	146	AS-CP-S	-	-	-	-	+	-	-	-	-
	162	AS-CP-S	-	+	-	-	-	-	-	+	-
	293	AS-CP-S	-	+	-	-	+	-	-	+	-
	294	AS-CP-S	-	+	-	-	+	-	-	+	-
Fortuna (PVS + PVM)	312	AS-25K-S	-	+	-	-	+	-	-	+	-
	374	AS-25K-S	-	+	-	-	+	-	-	+	-
	parent	-	+	+	-	+	+	-	+	+	-
	309	AS-CP-S	+	+	-	+	+	-	+	+	-
Kormilitsa (PVS)	360	AS-CP-S	-	+	-	-	+	-	-	+	-
	361	AS-CP-S	+	+	-	+	+	-	+	+	-
Orbita (PVM)	parent	-	+	-	-	+	-	-	+	-	-
	103	S-25K-AS	+	-	-	-	-	-	-	-	-
Picasso (PVM + PVY)	parent	-	-	+	+	-	+	+	-	+	+
	148	AS-CP-S	-	+	-	-	+	-	-	+	-
	parent	-	-	+	+	-	+	+	-	+	+
	161	AS-CP-S	-	+	-	-	-	-	-	+	-
	172	AS-CP-S	-	-	+	-	-	+	-	+	+
	192	AS-CP-S	-	-	+	-	+	+	-	-	+
	194	AS-25K-S	-	-	+	-	-	+	-	-	+
	257	AS-CP-S	-	+	-	-	+	-	-	+	-
	351	AS-25K-S	-	+	+	-	+	+	-	+	+
Sante (PVM + PVY)	352	AS-25K-S	-	-	+	-	+	+	-	+	+
	381	AS-25K-S	-	+	+	-	+	+	-	+	+
	383	AS-25K-S	-	+	-	-	-	-	-	-	-
	parent	-	-	+	-	-	+	-	-	+	-
Tokhtar (PVM)	291	AS-CP-S	-	-	-	-	-	-	-	-	-
	295	AS-CP-S	-	+	-	-	+	-	-	+	-
	339	AS-CP-S	-	-	-	-	+	-	-	+	-
	parent	-	-	+	-	-	+	-	-	+	-
	69	S-CP-AS	-	+	-	-	+	-	-	+	-
	82	S-CP-AS	-	+	-	-	+	-	-	+	-
	110	AS-CP-S	-	+	-	-	+	-	-	+	-
	160	AS-CP-S	-	+	-	-	+	-	-	+	-
	179	AS-CP-S	-	+	-	-	+	-	-	+	-
Zeren (PVS + PVM + PVY)	314	AS-CP-S	-	+	-	-	+	-	*	*	*
	315	AS-CP-S	-	+	-	-	+	-	-	+	-
	316	AS-CP-S	-	+	-	-	+	-	*	*	*
	398	AS-CP-S	-	+	-	-	+	-	*	*	*
	parent	-	+	+	+	+	+	+	+	+	+
	38	S-25K-AS	+	+	+	+	-	-	+	-	-
	59	S-25K-AS	+	+	+	+	+	+	+	+	+
	119	S-25K-AS	-	+	-	-	-	-	-	-	-
	344	AS-25K-S	+	+	-	+	+	-	+	+	-
	336	AS-25K-S	-	-	-	-	-	-	-	-	-

* not detected, because plant died, or not enough tissue to sample

- virus negative

+ virus positive