

1. Allele variants of *AI* gene nucleotide sequence in studied potato lines and varieties

Sample	Allele	Exon I																																			
		5	25	27	28	37	44	54	65	66	75	77	80	81	84	100	105	110	111	116	131	140	142	153	158	160	165	168	182	183	184	187	190	192	197	198	203
Krepysh 1	A1	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	C	T	C	A	C	A	A	A	T	G	A
Krepysh 2	A2	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Lyubava 1	A3	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Lyubava 2	A4	C	T	C	C	A	T	T	A	T	T	T	C	A	T	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A	
Lyubava 3	A5	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Meteor 1	A6	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Meteor 2	A7	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Zhigulevskii 1	A8	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Zhigulevskii 2	A9	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Favorit 1	A10	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	A	C	C	T	T	C	A	C	A	A	A	T	G	A
Favorit 2	A11	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	A	C	C	T	T	C	A	C	A	A	A	T	G	A
Velikan 1	A12	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Fioletovyi 1	A13	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Fioletovyi 2	A14	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Fioletovyi 3	A15	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	T	C	C	T	T	C	A	C	A	A	A	T	G	A
Vympel 1	A16	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Kolobok 1	A17	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Kolobok 2	A18	C	T	C	C	A	T	T	A	T	T	T	C	G	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Vasilek 1	A19	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Vasilek 2	A20	G	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Gulliver 1	A21	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Gulliver 2	A22	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	T	C	T	T	C	A	C	A	A	A	T	G	A
Fritella 1	A23	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Fritella 2	A24	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Golubizna 1	A25	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Golubizna 2	A26	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	C	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Golubizna 3	A27	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	A	C	T	A	A	C	T	G	A
Lyuks 1	A28	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	C	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Lyuks 1	A29	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Lyuks 3	A30	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	C	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Start 1	A31	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Start 2	A32	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Start 3	A33	A	T	C	C	T	T	T	A	T	T	T	C	A	T	A	C	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Bravo 1	A34	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Bravo 2	A35	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Gornyak 1	A36	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Gornyak 2	A37	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Irbitskii 1	A38	C	T	C	C	A	T	T	A	T	T	T	C	A	C	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Irbitskii 2	A39	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	A	C	C	T	T	C	A	C	A	A	A	T	G	A
Kortni 1	A40	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
3-43-2 1	A41	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	C	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
3-43-2 2	A42	C	T	T	C	A	T	T	A	T	C	T	C	A	T	A	C	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
3-43-6 1	A43	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
3-43-6 2	A44	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Sambo 1	A45	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Sambo 2	A46	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Gala 1	A47	C	A	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Gala 2	A48	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	C	T	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Impala 1	A49	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Impala 2	A50	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	C	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Red Skarlet 1	A51	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Red Skarlet 2	A52	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Nevskii 1	A53	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	T	T	T	C	A	C	A	A	A	T	G	A
Nevskii 2	A54	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Matushka 1	A55	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Russkii suvenir 1	A56	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Russkii suvenir 2	A57	C	T	C	C	A	T	T	A	T	T	C	A	T	A	G	G	T	T	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A	
Arlekin 1	A58	C	T	C	C	A	T	T	A	T	C	T	C	A	T	A	G	G	T	C	A	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Arlekin 2	A59	C	T	C	C	A	T	T	A	T	T	T	C	A	T	A	G	G	T	C	T	A	G	G	C	C	T	T	C	A	C	A	A	A	T	G	A
Babushka 1	A60																																				

Kolobok 2	A18	T	T	G	A	A	C	C	A	T	A	A	G	A	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Vasilek 1	A19	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Vasilek 2	A20	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Gulliver 1	A21	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Gulliver 2	A22	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Fritella 1	A23	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Fritella 2	A24	T	G	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	G	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Golubizna 1	A25	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Golubizna 2	A26	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Golubizna 3	A27	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Lyuks 1	A28	T	T	G	A	A	C	C	A	T	A	A	G	A	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Lyuks 1	A29	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Lyuks 3	A30	T	T	G	A	A	C	C	A	T	A	A	G	A	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	T
Start 1	A31	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Start 2	A32	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	G	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Start 3	A33	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	G	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Bravo 1	A34	T	T	A	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Bravo 2	A35	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Gornyak 1	A36	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	A	A
Gornyak 2	A37	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Irbitskii 1	A38	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Irbitskii 2	A39	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	A	A
Kortni 1	A40	G	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	A	A
3-43-2 1	A41	T	T	G	A	A	C	C	A	T	A	A	G	A	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	G	C	T	A	C	C	G	A
3-43-2 2	A42	T	T	G	G	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	T	T	T	A	C	T	A	C	C	A	A
3-43-6 1	A43	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
3-43-6 2	A44	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Sambo 1	A45	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Sambo 2	A46	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Gala 1	A47	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Gala 2	A48	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Impala 1	A49	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	T	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Impala 2	A50	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	T	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Red Skarlet 1	A51	T	G	A	A	G	T	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Red Skarlet 2	A52	T	G	A	A	G	C	C	G	C	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Nevskii 1	A53	C	T	G	A	G	T	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	A	G	C	C	T	T	A	C	T	A	C	C	G	A
Nevskii 2	A54	T	T	G	A	G	T	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	T	C	T	T	A	C	T	A	C	C	G	A
Matushka 1	A55	T	T	G	A	G	C	C	G	T	A	A	A	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Russkii suvenir 1	A56	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Russkii suvenir 2	A57	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Arlekin 1	A58	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	A	A
Arlekin 2	A59	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	C	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Babushka 1	A60	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Babushka 2	A61	T	T	G	A	G	C	A	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	A	C	C	T	T	A	T	A	C	C	G	A
Kuznechanka 1	A62	C	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	A	T	G	C	A	G	A	C	T	A	C	C	G	A	
Kuznechanka 2	A63	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Kuznechanka 3	A64	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Kemerovchanin 1	A65	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Tanai 1	A66	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	T	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Sarovskii 1	A67	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Sarovskii 2	A68	T	T	G	A	G	C	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	A	C	C	T	T	A	C	T	A	C	C	G	A
Sudarynya 1	A69	T	T	G	A	G	C	C	G	T	A	A	G	A	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A
Utro 1	A70	T	T	G	A	G	T	C	G	T	A	A	G	T	C	C	C	T	C	A	A	T	T	T	G	C	C	T	T	A	C	T	A	C	C	G	A

Sample	Allele	Exon VI																																			
		516	517	519	521	522	523	524	535	537	539	545	565	567	573	582	583	585	587	588	589	591	600	604	605	606	607	608	609	610	611	612	620	621	623		
Krepysh 1	A1	T	T	C	G	C	C	G	T	A	A	C	G	C	T	A	T	G	C	C	T	C	A	G	G	T	G	C	A	A	T	T	T	G	T		
Krepysh 2	A2	T	T	C	G	C	C	G	C	T	A	C	G	C	T	A	T	G	C	C	T	C	A	G	G	T	G	C	A	A	T	T	T	G	T		
Lyubava 1	A3	T	T	C	G	C	C	G	C	T	A	C	G	C	T	A	T	G	C	C	T	C	A	G	G	T	G	C	A	A	T	T	T	G	T		
Lyubava 2	A4	T	T	C	G	C	C	G	C	T	A	C	G	C	T	A	T	G	C	C	T	C	A	G	G	T	G	C	A	A	T	T	T	G	T		
Lyubava 3	A5	T	T	C	G	C	C	G	C	T	A	C	G	C	T	A	T	G	C	C	T	C	A	G	G	T	G	C	A	A	T	T	T	G	T		
Meteor 1	A6	T	T	C	G	T	C	G	C	T	A	C	G	C	T	A	T	G	C	C	T	C	A	G	G	T	G	C	A	A	T	T	T	G	T		
Meteor 2	A7	T	T	C	G	T	C	G	C	T	A	C	G	C	T	A																					