

**Table S1 Knob counts of 302 individuals from 37 landraces.** Ab10-III is a variant that is very similar in structure to Ab10-I (KANIZAY *et al.* 2012).

GRIN ID	Location	Chromosome 10 type	TR-1 knobs	180-bp knobs	Mixed knobs
AMES 19880-1	Puebla, Mexico	Ab10-I	1	0	9
AMES 19880-2	Puebla, Mexico	N10	2	3	2
AMES 19880-3	Puebla, Mexico	N10	2	5	2
AMES 19880-4	Puebla, Mexico	N10	1	5	3
AMES 19880-5	Puebla, Mexico	N10	2	7	3
AMES 19880-6	Puebla, Mexico	Ab10-I	1	1	3
AMES 19880-7	Puebla, Mexico	N10	2	4	3
AMES 19880-8	Puebla, Mexico	N10	1	5	4
AMES 19980-1	Mexico, Oaxana	K10L2	1	11	11
AMES 19980-2	Mexico, Oaxana	Ab10-III	0	12	16
AMES 19980-3	Mexico, Oaxana	N10	0	13	16
AMES 19980-4	Mexico, Oaxana	N10	0	14	12
AMES 19980-5	Mexico, Oaxana	N10	0	13	12
AMES 19980-6	Mexico, Oaxana	Ab10-III	3	13	8
AMES 19980-7	Mexico, Oaxana	N10	1	12	8
AMES 19980-8	Mexico, Oaxana	Ab10-III	0	12	15
AMES 19980-9	Mexico, Oaxana	N10	0	16	13
AMES 19980-10	Mexico, Oaxana	N10	0	12	16
AMES 19980-11	Mexico, Oaxana	N10	0	10	13
AMES 19980-12	Mexico, Oaxana	N10	0	14	13
AMES 19980-13	Mexico, Oaxana	N10	0	10	11
AMES 19980-14	Mexico, Oaxana	Ab10-III	1	13	12
AMES 19980-15	Mexico, Oaxana	Ab10-III	2	12	10
AMES 19980-16	Mexico, Oaxana	Ab10-III	0	15	12
AMES 19980-17	Mexico, Oaxana	Ab10-III	0	11	13
AMES 19980-18	Mexico, Oaxana	AB10-III	0	11	15
AMES 19980-19	Mexico, Oaxana	N10	0	11	13
AMES 19980-20	Mexico, Oaxana	N10	0	14	10
AMES 19980-21	Mexico, Oaxana	Ab10-III	0	13	10
AMES 19980-22	Mexico, Oaxana	K10L2	1	11	11
AMES 19980-23	Mexico, Oaxana	N10	1	13	11
AMES 21972-1	US, Illinois	K10L2	1	10	6
AMES 21972-2	US, Illinois	K10L2	1	10	8
AMES 21972-3	US, Illinois	K10L2	1	10	7
AMES 21972-4	US, Illinois	K10L2	1	12	8
NSL 18-1	Cundinamarca, Colombia	Ab10-III	2	7	6
NSL 18-2	Cundinamarca, Colombia	N10	2	8	4
NSL 18-3	Cundinamarca, Colombia	N10	2	11	2
NSL 18-4	Cundinamarca, Colombia	N10	0	10	1

NSL 18-5	Cundinamarca, Colombia	K10L2	2	7	2
NSL 18-6	Cundinamarca, Colombia	N10	1	12	3
NSL 18-7	Cundinamarca, Colombia	N10	1	10	3
NSL 18-8	Cundinamarca, Colombia	N10	0	10	6
NSL 18-9	Cundinamarca, Colombia	N10	0	13	3
NSL 18-10	Cundinamarca, Colombia	N10	2	6	5
NSL 18-11	Cundinamarca, Colombia	N10	2	10	1
NSL 18-12	Cundinamarca, Colombia	N10	1	10	7
NSL 18-13	Cundinamarca, Colombia	N10	2	11	2
NSL 2824-1	Mexico	N10	2	4	2
NSL 2824-2	Mexico	N10	0	6	2
NSL 2824-3	Mexico	N10	2	4	4
NSL 2824-4	Mexico	N10	0	4	3
NSL 2824-5	Mexico	N10	1	3	4
NSL 2824-6	Mexico	N10	2	2	3
NSL 2824-7	Mexico	N10	0	4	4
NSL 2824-8	Mexico	N10	2	5	2
NSL 2824-9	Mexico	N10	1	2	4
NSL 2824-10	Mexico	K10L2	0	4	2
NSL 2824-11	Mexico	N10	0	5	7
NSL 2824-12	Mexico	N10	0	3	6
NSL 2824-13	Mexico	N10	0	3	5
NSL 2824-14	Mexico	K10L2	0	2	8
NSL 2824-15	Mexico	K10L2	0	4	6
NSL 2824 - 16	Mexico	N10	0	5	6
NSL 2827-1	Mexico	K10L2	0	11	9
NSL 2827-2	Mexico	K10L2	0	12	7
NSL 2827-3	Mexico	K10L2	0	10	8
NSL 2827-4	Mexico	K10L2	1	10	8
NSL 2827-5	Mexico	K10L2	0	11	8
NSL 2827-6	Mexico	N10	0	15	7
NSL 2827-7	Mexico	K10L2	0	13	8
NSL 2827-8	Mexico	N10	0	11	8
NSL 2827-9	Mexico	N10	0	13	6
NSL 2828-1	Mexico	Ab10-III	1	13	8
NSL 2828-2	Mexico	N10	0	13	11
NSL 2828-3	Mexico	N10	4	14	9
NSL 2828-4	Mexico	N10	0	10	12
NSL 2828-5	Mexico	N10	0	9	13
NSL 2828-6	Mexico	Ab10-III	0	12	12
NSL 2828-7	Mexico	Ab10-III	1	10	12
NSL 2828-8	Mexico	N10	0	12	13

NSL 2828-9	Mexico	N10	0	10	16
NSL 2828-10	Mexico	Ab10-III	0	10	14
NSL 2828-11	Mexico	N10	1	13	14
NSL 2828-12	Mexico	Ab10-III	0	12	15
NSL 2828-13	Mexico	N10	1	11	10
NSL 2828-14	Mexico	Ab10-III	0	13	13
NSL 2828-15	Mexico	N10	2	10	9
NSL 2828-16	Mexico	N10	1	13	8
NSL 2833-1	Mexico	N10	0	12	11
NSL 2833-2	Mexico	N10	1	9	9
NSL 2833-3	Mexico	N10	1	11	7
NSL 2833-4	Mexico	N10	2	9	9
NSL 2833-5	Mexico	N10	1	8	9
NSL 2833-6	Mexico	N10	1	9	9
NSL 2833-7	Mexico	N10	1	7	7
NSL 2836-1	Mexico	N10	0	10	10
NSL 2836-2	Mexico	N10	0	12	7
NSL 2836-3	Mexico	N10	2	10	9
NSL 2836-4	Mexico	N10	1	9	9
NSL 2836-5	Mexico	N10	1	8	9
NSL 2836-6	Mexico	N10	0	10	10
NSL 2836-7	Mexico	N10	0	11	10
NSL 2837-1	Mexico	N10	0	8	3
NSL 2837-2	Mexico	N10	1	6	6
NSL 2840-1	Mexico	Ab10-III	0	13	12
NSL 2840-2	Mexico	N10	0	10	10
NSL 2840-3	Mexico	N10	0	11	13
NSL 2840-4	Mexico	N10	0	15	9
NSL 2840-5	Mexico	N10	0	10	15
NSL 2840-6	Mexico	N10	0	13	11
NSL 2840-7	Mexico	N10	0	12	13
NSL 2840-8	Mexico	N10	0	9	12
NSL 2840-9	Mexico	N10	0	14	13
NSL 2840-10	Mexico	N10	0	16	10
NSL 2841-1	Mexico	K10L2	0	4	12
NSL 2841-2	Mexico	K10L2	1	10	8
NSL 2841-3	Mexico	K10L2	0	7	11
NSL 2841-4	Mexico	K10L2	1	5	10
NSL 2841-5	Mexico	K10L2	0	6	10
NSL 2841-6	Mexico	K10L2	0	6	11
NSL 2841-7	Mexico	N10	0	4	9
NSL 2843-1	Mexico	N10	0	8	5

NSL 2843-2	Mexico	N10	3	10	5
NSL 2843-3	Mexico	N10	0	10	4
NSL 2843-4	Mexico	N10	2	9	4
NSL 2843-5	Mexico	N10	1	11	3
NSL2844-1	Mexico	N10	1	8	6
NSL2844-2	Mexico	Ab10-I	1	8	11
NSL2844-3	Mexico	N10	0	7	9
NSL2844-4	Mexico	N10	0	12	4
NSL2844-5	Mexico	N10	0	12	7
PI 217409-1	Mexico	N10	0	11	9
PI 217409-2	Mexico	N10	0	12	9
PI 217409-3	Mexico	N10	1	9	10
PI 217409-4	Mexico	N10	0	12	10
PI 217409-5	Mexico	N10	2	12	10
PI 217409-6	Mexico	N10	0	9	11
PI 217409-7	Mexico	N10	0	7	13
PI 217409-8	Mexico	N10	0	9	11
PI 217409-9	Mexico	N10	0	6	10
PI 420244-1	Sonora, Mexico	N10	1	10	9
PI 420244-2	Sonora, Mexico	N10	0	9	9
PI 420244-3	Sonora, Mexico	K10L2	1	10	8
PI 420244-4	Sonora, Mexico	N10	0	8	13
PI 420244-5	Sonora, Mexico	N10	0	9	13
PI 435329-1	Bolivia	N10	2	6	8
PI 435329-2	Bolivia	Ab10-III	0	5	9
PI 435329-3	Bolivia	Ab10-III	3	5	7
PI 435329-4	Bolivia	N10	0	5	8
PI 435329-5	Bolivia	N10	3	8	6
PI 435329-6	Bolivia	N10	3	6	8
PI 444296-1	Caqueta, Colombia	N10	1	12	8
PI 444296-2	Caqueta, Colombia	N10	0	11	10
PI 444296-3	Caqueta, Colombia	N10	0	13	10
PI 444296-4	Caqueta, Colombia	Ab10-III	0	9	6
PI 444296-5	Caqueta, Colombia	Ab10-III	2	8	11
PI 444296-6	Caqueta, Colombia	N10	2	11	8
PI 444296-7	Caqueta, Colombia	Ab10-III	1	13	8
PI 444296-8	Caqueta, Colombia	Ab10-III	0	8	11
PI 444296-9	Caqueta, Colombia	N10	0	7	13
PI 444296-10	Caqueta, Colombia	Ab10-III	0	9	11
PI 444296-11	Caqueta, Colombia	N10	1	11	9
PI 444834-1	Huila, Colombia	N10	2	10	9
PI 444834-2	Huila, Colombia	N10	3	11	7

PI 444834-3	Huila, Colombia	N10	0	6	12
PI 444834-4	Huila, Colombia	Ab10-III	3	8	11
PI 444834-5	Huila, Colombia	N10	0	11	9
PI 444834-6	Huila, Colombia	N10	0	11	11
PI 444834-7	Huila, Colombia	N10	1	13	10
PI 444834-8	Huila, Colombia	N10	1	9	10
PI 444834-9	Huila, Colombia	N10	0	14	11
PI 444954-1	Magdalena, Colombia	N10	1	11	5
PI 444954-2	Magdalena, Colombia	N10	1	13	8
PI 444954-3	Magdalena, Colombia	N10	1	8	7
PI 444954-4	Magdalena, Colombia	N10	0	13	11
PI 444954-5	Magdalena, Colombia	N10	0	12	8
PI 444954-6	Magdalena, Colombia	N10	1	13	7
PI 445007-1	Magdalena, Colombia	N10	0	7	7
PI 445007-2	Magdalena, Colombia	N10	2	4	8
PI 445007-3	Magdalena, Colombia	N10	0	9	8
PI 445007-4	Magdalena, Colombia	N10	0	8	10
PI 445007-5	Magdalena, Colombia	N10	0	10	10
PI 445007-6	Magdalena, Colombia	N10	0	8	7
PI 445007-7	Magdalena, Colombia	N10	3	11	7
PI 445379-1	Santander, Colombia	N10	3	9	4
PI 445379-2	Santander, Colombia	N10	0	8	4
PI 445379-3	Santander, Colombia	Ab10-I	0	8	9
PI 445379-4	Santander, Colombia	N10	3	5	5
PI 445379-5	Santander, Colombia	Ab10-I	2	11	7
PI 445379-6	Santander, Colombia	Ab10-I	0	12	7
PI 445379-7	Santander, Colombia	N10	2	9	6
PI 483314-1	South Carolina, USA	N10	0	7	8
PI 483314-2	South Carolina, USA	N10	1	12	5
PI 483314-3	South Carolina, USA	N10	1	7	6
PI 483314-4	South Carolina, USA	N10	0	8	8
PI 483314-5	South Carolina, USA	N10	1	8	4
PI 483314-6	South Carolina, USA	N10	1	11	4
PI 483314-7	South Carolina, USA	N10	1	7	4
PI 490825-1	Chiquimula, Guatemala	N10	2	8	10
PI 490825-2	Chiquimula, Guatemala	Ab10-III	1	10	14
PI 490825-3	Chiquimula, Guatemala	N10	1	10	13
PI 490825-4	Chiquimula, Guatemala	N10	0	8	14
PI 490825-5	Chiquimula, Guatemala	N10	0	9	14
PI 490825-6	Chiquimula, Guatemala	N10	0	9	14
PI 490825-7	Chiquimula, Guatemala	Ab10-III	0	10	14
PI 490825-8	Chiquimula, Guatemala	N10	0	11	13

PI 490825-9	Chiquimula, Guatemala	Ab10-III	0	10	13
PI 490825-10	Chiquimula, Guatemala	Ab10-III	0	10	13
PI 490825-11	Chiquimula, Guatemala	N10	0	11	12
PI 490825-12	Chiquimula, Guatemala	N10	1	9	11
PI 490825-13	Chiquimula, Guatemala	Ab10-III	0	11	12
PI 490825-14	Chiquimula, Guatemala	Ab10-III	0	9	12
PI 490921-1	Nayarit, Mexico	N10	0	11	6
PI 490921-2	Nayarit, Mexico	N10	1	13	8
PI 490921-3	Nayarit, Mexico	N10	0	10	6
PI 490921-4	Nayarit, Mexico	N10	0	13	8
PI 490921-5	Nayarit, Mexico	N10	0	8	7
PI 490921-6	Nayarit, Mexico	N10	0	2	7
PI 490921-7	Nayarit, Mexico	N10	0	2	8
PI 490921-8	Nayarit, Mexico	N10	0	8	10
PI 490921-9	Nayarit, Mexico	N10	1	12	7
PI 503574-1	Sinaloa, Mexico	K10L2	1	11	6
PI 503574-2	Sinaloa, Mexico	K10L2	1	11	10
PI 503574-3	Sinaloa, Mexico	N10	0	12	11
PI 503574-4	Sinaloa, Mexico	N10	0	12	11
PI 503574-5	Sinaloa, Mexico	N10	2	11	7
PI 503574-6	Sinaloa, Mexico	N10	0	10	6
PI 503574-7	Sinaloa, Mexico	N10	0	11	9
PI 620775-1	Chiapas, Mexico	K10L2	0	10	9
PI 620775-2	Chiapas, Mexico	N10	0	11	14
PI 620775-3	Chiapas, Mexico	N10	0	11	10
PI 620775-4	Chiapas, Mexico	N10	0	8	10
PI 620775-5	Chiapas, Mexico	K10L2	1	10	9
PI 620775-6	Chiapas, Mexico	K10L2	2	7	3
PI 620775-7	Chiapas, Mexico	N10	0	10	7
PI 620775-8	Chiapas, Mexico	K10L2	0	6	6
PI 620831-1	Mexico, Mexico	K10L2	0	8	5
PI 620831-2	Mexico, Mexico	N10	1	5	7
PI 620831-3	Mexico, Mexico	N10	0	4	6
PI 620831-4	Mexico, Mexico	N10	0	8	6
PI 620831-5	Mexico, Mexico	N10	0	6	6
PI 620831-6	Mexico, Mexico	K10L2	0	8	6
PI 620831-7	Mexico, Mexico	N10	1	9	3
PI 620831-8	Mexico, Mexico	N10	0	8	4
PI 620859-1	Sonora, Mexico	K10L2	1	9	11
PI 620859-2	Sonora, Mexico	Ab10-III	0	10	11
PI 620859-3	Sonora, Mexico	N10	1	11	7
PI 620859-4	Sonora, Mexico	N10	0	6	10

PI 620859-5	Sonora, Mexico	N10	0	11	9
PI 620859-6	Sonora, Mexico	N10	1	8	11
PI 628470-1	Oaxaca, Mexico	N10	1	16	11
PI 628470-2	Oaxaca, Mexico	N10	1	12	12
PI 628470-3	Oaxaca, Mexico	N10	0	13	13
PI 628470-4	Oaxaca, Mexico	N10	1	12	13
PI 628470-5	Oaxaca, Mexico	N10	0	14	15
PI 628473-1	Oaxaca, Mexico	N10	0	7	14
PI 628473-2	Oaxaca, Mexico	N10	0	11	15
PI 628473-3	Oaxaca, Mexico	N10	0	12	15
PI 628473-4	Oaxaca, Mexico	N10	1	10	13
PI 628473-5	Oaxaca, Mexico	N10	0	8	12
PI 645866-1	Mexico, Mexico	N10	0	10	4
PI 645866-2	Mexico, Mexico	N10	1	9	5
PI 645866-3	Mexico, Mexico	N10	0	9	5
PI 645866-4	Mexico, Mexico	N10	0	11	4
PI 645866-5	Mexico, Mexico	N10	0	10	5
PI 645866-6	Mexico, Mexico	N10	0	8	6
PI 645866-7	Mexico, Mexico	N10	0	4	11
PI 645866-8	Mexico, Mexico	Ab10-I	1	9	3
PI 645866-9	Mexico, Mexico	N10	1	9	6
PI 645866-10	Mexico, Mexico	N10	0	10	3
PI 645866-11	Mexico, Mexico	N10	1	11	4
PI 645891-1	Michoacan, Mexico	N10	1	3	2
PI 645891-2	Michoacan, Mexico	N10	1	4	6
PI 645891-3	Michoacan, Mexico	N10	0	10	2
PI 645891-4	Michoacan, Mexico	N10	0	9	2
PI 645891-5	Michoacan, Mexico	N10	0	7	2
PI 645891-6	Michoacan, Mexico	N10	0	8	2
PI 645933-1	Oaxaca, Mexico	N10	0	12	6
PI 645933-2	Oaxaca, Mexico	N10	2	11	7
PI 645933-3	Oaxaca, Mexico	N10	0	10	6
PI 645933-4	Oaxaca, Mexico	N10	0	11	8
PI 645933-5	Oaxaca, Mexico	N10	0	11	11
PI628445-1	Jalisco, Mexico	Ab10-I	0	9	7
PI628445-2	Jalisco, Mexico	Ab10-I	0	4	13
PI628445-3	Jalisco, Mexico	Ab10-I	0	14	13
PI628445-4	Jalisco, Mexico	Ab10-I	0	12	8
PI628445-5	Jalisco, Mexico	N10	0	10	4
PI628445-6	Jalisco, Mexico	N10	0	8	7
PI444541 - 1	Cundinamarca, Colombia	N10	2	10	9
PI444541 - 2	Cundinamarca, Colombia	N10	1	7	6

PI444541 - 3	Cundinamarca, Colombia	N10	2	9	7
PI444541 - 4	Cundinamarca, Colombia	Ab10-I	1	10	8
PI444541 - 5	Cundinamarca, Colombia	N10	0	10	5
PI444541 - 6	Cundinamarca, Colombia	N10	2	12	6
PI444541 - 7	Cundinamarca, Colombia	Ab10-I	1	10	9
PI444541 - 8	Cundinamarca, Colombia	Ab10-I	1	12	6
PI445323 - 1	Norte de Santander, Colombia	N10	1	10	2
PI445323 - 2	Norte de Santander, Colombia	N10	2	6	3
PI445323 - 3	Norte de Santander, Colombia	N10	2	6	4
PI445323 - 4	Norte de Santander, Colombia	N10	0	10	3
PI445323 - 5	Norte de Santander, Colombia	K10L2	3	6	1