

# Supplementary materials

## Supplementary Table 1: Primers included in the study

KO Primers	Details	Primer name	Primer Sequence	
<b>LdBPK_302600.1 (AAPO)</b>	Donar F'	AK82	CGTGTAGCTGTTACCCGGTGC GGCCGCAAGgtataatgcagacctgtgc	
	Donar R'	AK83	ACCGCACTCCAGCAGTGAGGCGGGTCCGTGccaattgagagacctgtgc	
	5' SEED F'	AK84	gaaattaatacactactataggCAACAGAGGAGACGTCTATAgttttagagctagaataagc	
	3' SEED F'	AK85	gaaattaatacactactataggCCGCTTTCAGACTATAAACgttttagagctagaataagc	
	Seq F'	AK86	CAGAGGACCAGTTCAACGTCG	
	Seq R'	AK87	GCGATCTGCTGCTGCATTGG	
	5' UTR F'	AK90	TCTCTACAGCAGTCGACG	
	3' UTR R'	AK91	GTTCTCTTTCACCCCTTTCGG	
	<b>LdBPK_291360.1 (PAPO - I)</b>	Donar F'	AM35	ACCCACCTTGTITTTTATTTCTGCATCCTTCgtataatgcagacctgtgc
Donar R'		AM36	CGCTACTCAGCTCGCTTCGCTTTCGCTCTccaattgagagacctgtgc	
5' SEED		AM37	gaaattaatacactactataggGGGGAATACGGGAGAGITCAgttttagagctagaataagc	
3' SEED		AM38	gaaattaatacactactataggTCCGCTTCCGCCAATGGACAgttttagagctagaataagc	
Seq F'		AM39	GCCAGTGCAGGTGAATGAGC	
Seq R'		AM40	ACACAACGGTGGCGATGTCC	
5' UTR F'		AM41	GGGCAAAACGCGAAACGG	
3' UTR R'		AM42	AGGCAGAGGGAGCAGAGAGC	
Donar F'		AM43	ACCGGCCGCTTCACAGCTCTCCTCCGCTTgtataatgcagacctgtgc	
<b>LdBPK_020680.1 (PAPO - II)</b>	Donar R'	AM44	GCGAAGGGGGTGGTGCAGGGCGCAGCTccaattgagagacctgtgc	
	5' SEED	AM45	gaaattaatacactactataggTACGTGCGATCTCGCTCTCGgttttagagctagaataagc	
	3' SEED	AM46	gaaattaatacactactataggCCCGCACATGGGAATGCGAAgttttagagctagaataagc	
	Seq F'	AM47	GCTGCCTCATCAAGGACGAGG	
	Seq R'	AM48	ACTCGATAGCCGCATCTCTGG	
	5' UTR F'	AM49	GGCAGTGCATCTCATTTTCGGC	
	3' UTR R'	AM50	CCACCATACACCGACAGACG	
	<b>LdBPK_221270.1 (AQP)</b>	Donar F'	AL34	GCTCGCAGACTCTCTCTCTGCAGCGCGCTgtataatgcagacctgtgc
		Donar R'	AL42	GGAGAAGCGCGAAAGAAATATCAGGAAAACccaattgagagacctgtgc
5' SEED		AL36	gaaattaatacactactataggTGATGGTGTCTTTGAAACGCgttttagagctagaataagc	
3' SEED		AL43	gaaattaatacactactataggACCTAAACCCACAATGGAGgttttagagctagaataagc	
Seq F'		AL44	CCGCAAATCCGAAGAGTGCG	
Seq R'		AL45	ACACCACCGCTAATCGGTCC	
5' UTR F'		AL46	GTGCAGCTCTCACCCATCG	
3' UTR R'		AL47	CAAGTCTCCCGCATCTCTCG	
sgRNA Reverse		R'	ML42	AAAAGCACCAGCTCGGTGCCACTTTTCAAGTTGATAACGGACTAGCCTTATTTTAACTTgctatttagctctaaac
<b>Donar DNA</b>				
<b>Gentamycin</b>	F'	AG06	GCTCGACGTGTGCTACTGAAGC	
	R'	AG07	AATATCACGGGTAGCCAACGC	
	F'	AF86	CAGAGGACCAAGTTCAACGTCG	
	R'	AF87	GCGATCTGCTGCTGCATTGG	
	<b>Puromycin</b>	F'	AF88	CCCAGATCGACACATGAGCG
R'		AF89	TCATGCACCATGTCTCTCGGC	
<b>Knock-In</b>				
<b>LdBPK_020680.1 (PAPO - II)</b>	Donar F'	AM67	GCGTCTCGTTACGGCTCCACGGCGCTTCGGTATAATGCAGACCTGCTGC	
	Donar R'	AM68	TGCGGATGTCTCACGGCTGAGGCGGTTAACCAATTTGAGAGACCTGCTGC	
	5' SEED	AM69	GAAATTAATACGACTCACTATAGGACATGATGATGCTGCGAGAGITTTAGAGCTAGAATAGC	
	3' SEED	AM70	GAAATTAATACGACTCACTATAGGGTGTGGCAGCACCCGCTGCCGTTTTAGAGCTAGAATAGC	
<b>qPCR Primers</b>				
<b>LdBPK_302600.1 (AAPO)</b>	F'	AM79	GTCAGGGCAACCCGAAA	
	R'	AM80	TTGAAGACACCCCGCTA	
<b>LdBPK_291360.1 (PAPO - I)</b>	F'	AM81	GAGTGTACGAGCATCTCG	
	R'	AM82	CACGCTTCATCAATAAGGTCA	
<b>LdBPK_020680.1 (PAPO - II)</b>	F'	AM83	CTGAAGATCGAGGCGGA	
	R'	AM84	TGCTTGATGCTGTGGAACA	
<b>LdBPK_221270.1 (AQP)</b>	F'	AM85	CGCCGAAAAGTGTGTTAC	
	R'	AM86	AAGACACCCCGCTAAT	
<b>LdBPK_362480.1 (cGAPDH)</b>	F'	AM55	ATTCTCACGCACGAGA	
	R'	AM56	GTACACGACGCATTTCGATA	
<b>LdBPK_180360.1 (GPI8)</b>	F'	AM57	GATACATGCCATGCGATT	
	R'	AM58	GCAACGAGTACATCTCATTC	