

Table S1. Plasmids used in this study.

Name	Description	Used for
pUNIV-KI	Modified from p7TetOS1, containing HXGPRT cassette	cloning
pUNIV-KI-R5Ty	Contains TgROM5-Ty/SAG1-3'UTR/HXGPRT	Template for ROM5-Ty/HXGPRT
pUNIV-KI-HAR4	Contains HA-TgROM4/SAG1-3'UTR/HXGPRT	Template for HA-ROM4/HXGPRT
pEntry-P4P1r-R5U5	5'UTR of TgROM5 cloned into pDONR-P4P1r	LR reaction to make
pEntry-P1P2-loxP-R5Ty	loxP-TgROM5-Ty/SAG1-3'UTR/HXGPRT cloned into pDONR-P1P2	pDEST-loxP-R5Ty
pEntry-P2rP3-R5U3	3'UTR of TgROM5 cloned into pDONR-P2rP3	Floxing TgROM5
pDEST-loxP-R5Ty	R5-5'UTR/loxP-TgROM5-Ty/SAG1-3'UTR/HXGPRT-loxP/R5-3'UTR	
pEntry-P4P1r-R4U5	5'UTR of TgROM4 cloned into pDONR-P4P1r	LR reaction to make
pEntry-P1P2-loxP-HAR4	loxP-HA-TgROM4/SAG1-3'UTR/HXGPRT cloned into pDONR-P1P2	pDEST-loxP-HAR4
pEntry-P2rP3-R4U3	3'UTR of TgROM4 cloned into pDONR-P2rP3	Floxing TgROM4
pDEST-loxP-HAR4	R4-5'UTR/loxP-HA-TgROM4/SAG1-3'UTR/HXGPRT-loxP/R4-3'UTR	Template for HA-ROM1/HXGPRT
pS1HA9-ROM1-HX	An HXGPRT cassette was inserted to pS1HA9-ROM1 at SpeI site	
pEntry-P4P1r-R1U5	5'UTR of TgROM1 cloned into pDONR-P4P1r	LR reaction to make
pEntry-P1P2-loxP-HAR1	loxP-HA-TgROM1/SAG1-3'UTR/HXGPRT cloned into pDONR-P1P2	pDEST-loxP-HAR1
pEntry-P2rP3-R1U3	3'UTR of TgROM1 cloned into pDONR-P2rP3	Floxing TgROM1
pDEST-loxP-HAR1	R1-5'UTR/loxP-HA-TgROM1/SAG1-3'UTR/HXGPRT-loxP/R1-3'UTR	
pET16b-R5n	Express His-tag R5n to purify antigen for antibody production	R5n expression
pET28a-R4n	Express His-tag R4n to purify antigen for antibody production	R4n expression