Table S3. Tandem minigene (TMG) constructs

TMG	Mutated Gene	Mutated* Minigene Amino Acid Sequence	TMG Amino Acid Sequence
1	ALK	RVLKGGSVRKLR**H**AKQLVLELGEEA	RVLKGGSVRKLR**H**AKQLVLELGEEAQNAADSYSWVP E**Q**AESRAMENQYSPTSFLSINSKEET**G**HLENGNKYPN LEFIPLLVVILFAV**H**TGLFISTQQQVTESDRPRKVRFRI**V** SSHSGRVLKEVYEIYNESLFDLLS**A**LPYVGPSVTPMTG KKLRDDYLASL**H**PRLHSIYVSEGYPDIKQELLRCDI**I**CK GGHSTVTDLQVGTKLDLRDDKD**N**IERLRDKKLAPI
	CD93	QNAADSYSWVPE**Q**AESRAMENQYSP	
	ERBB2IP	TSFLSINSKEET**G**HLENGNKYPNLE	
	FCER1A	FIPLLVVILFAV**H**TGLFISTQQQVT	
	GRXCR1	ESDRPRKVRFRI**V**SSHSGRVLKEVY	
	KIF9	EIYNESLFDLLS**A**LPYVGPSVTPMT	
	NAGS	GKKLRDDYLASL**H**PRLHSIYVSEGY	
	NLRP2	PDIKQELLRCDI**I**CKGGHSTVTDLQ	
	RAC3	VGTKLDLRDDKD**N**IERLRDKKLAPI	
2	RAP1GDS1	VKLLGIHCQNAA**I**TEMCLVAFGNLA	VKLLGIHCQNAA**I**TEMCLVAFGNLANLRKSSPGTSNK **C**LRQVSSLVLHIELGRLHPCVMASL**K**AQSPIPNLYLTG LLPIHTLDVKST**T**LPAAVRCSESRLMTMDNFGKHYTL **K**SEAPLYVGGMPVMTMDNFGKHYTL**K**SEAPLYVGG MPVHDGPFVFAEVNA**N**YITWLWHEDESRQAKEDFS GYDFE**T**RLHVRIHAALASPAVRPGICPGPD**G**WRIPLG PLPHEF
	RASA1	NLRKSSPGTSNK**C**LRQVSSLVLHIE	
	RETSAT	LGRLHPCVMASL**K**AQSPIPNLYLTG	
	SEC24D	LLPIHTLDVKST**T**LPAAVRCSESRL	
	SLIT1	MTMDNFGKHYTL**K**SEAPLYVGGMPV	
	TARBP1	AVDVEGMKTQYS**V**KQRTENVLRIFL	
	TGM6	HDGPFVFAEVNA**N**YITWLWHEDESR	
	TTC39C	QAKEDFSGYDFE**T**RLHVRIHAALAS	
	POU5F2	PAVRPGICPGPD**G**WRIPLGPLPHEF	
3	SENP3	VAQELFQGSDLG**V**AEEAERPGEKAG	VAQELFQGSDLG**V**AEEAERPGEKAGGTATTLTDLTN P**LSL**THIRRIVPGAVS**DGRMGSWRAPPTLS**VPASPLT LLQSHFRQQARVRHLSQEFGWLQITP**PGIPVHESTAT LQHYSSGWAEKSKIL**SPDSKIQMVSSSQK**RALLCLIAL LSRKQTWKIRTCLRRVRQKCF**TLLSPQEAGATK**DECE GEEGAAGSRDLRSWVT**EETGMPNKASKQ**GPGSTQ REGSLEEIPGLTNIYKLLTSVWGLLRLWVWGPALAFT SCVTSEIAMRLL**
	LHX9	GTATTLTDLTNP**LSL**	
	KLHL6	THIRRIVPGAVS**DGRMGSWRAPPTLS**VPASPLTLLQSHFRQQARV	
	AR	RHLSQEFGWLQITP**PGIPVHESTATLQ HYSSGWAEKSKIL**	
	PDZD2	SPDSKIQMVSSSQK**RALLCLIALLSRKQ TWKIRTCLRRVRQKCF**	
	HLA-DOA	TLLSPQEAGATK**DECEGEEGAAGSRDL RSWVT**	
	LONRF3	EETGMPNKASKQ**GPGSTQREGSLEEI PGLTNIYKLLTSVWGLLRLWVWGPAL AFTSCVTSEIAMRLL**	

*Red and bolded denotes mutated amino acids and neo-sequences encoded by point mutations, or nucleotide insertions or deletions. For splice-site donor mutations (*HLA-DOA* and *LONRF3*), we designed mutant minigene transcripts that continued into the downstream intron until the next stop codon, based on the assumption that the mutations prevented splicing at that site. The splice-site acceptor mutation in *DIP2C* was not assessed.