

1 **Supplementary Information**

2 Generation of transgenic marmosets expressing genetically encoded calcium indicators

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13 Supplementary Table S1. Genomic integration loci of the transgene in transgenic marmosets.

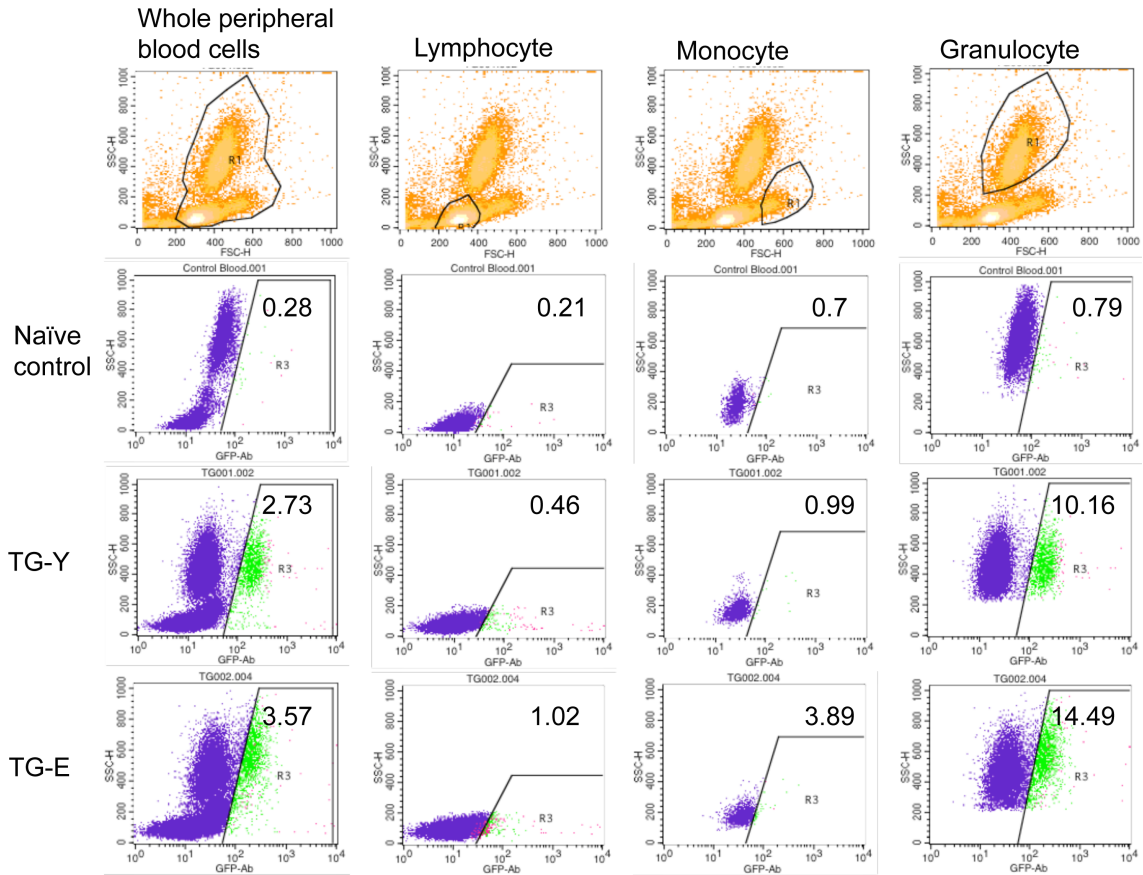
Tg ID	Genomic location	Overlapping genes	Length	%ID	Sequence (Bold: marmoset sequence, Italic: lentiviral sequence)
TG-Y	9:64243780	ATXN7L3B	511	99.61	CCCTCTCCGCAGTCGTTTACAAATTTAAAGCTTGGAAATATTTTTTGCATCAGTTTCGT
TG-E	2:197330287	Intergenic region	218	100	<i>ATCTTGTCTTCGTTGGGAGTGAATTAGCCCTTCCACTAACCGAGTACC</i> AGAAATTTGGTTAATACACCCTTGTTAGTTGAATGAACAATGGCC CATTTCAAAAAGAAAAGCCAGTAATCTTGTGGGAGGA
	7:136607274	RTCA	159	100	<i>GCAAAAAGCAGATCTTGTCTTCGTTGGGAGTGAATTAGCCCTTCCAATT</i> ATCCAGTGGTTTTAACATCTATTGATGATTTTTCTCTGCATCAGT TATTTCAAT
	11:32419859	NCAPD3	540	99.81	<i>GAGAGACCCAGTACAAGCAAAAAGCAGATCTTGTCTTCGTTGGGAGTGA</i> <i>ATTAGCCCTTCCGATCCTATAATGCACAGGAAAAGATTTCTTAAAG</i> ATACTTTAATCATTAAAGAAAACCCTGTCAAAGTGAATTTATCAA AA
	16:72233830	Intergenic region	142	89.44	<i>ATATAAGCAGCGCGTTTTGCCTGTACTGGGTCTCTCTGGTTAGACCAGAT</i> <i>CTGAGCCTGGGAGCTCGAATTCTCTGGCCGTCGTTTTACAACGTCGT</i> GACTGGGAAAACCCTGGCGTTACCACTTAATCGCCTTGC
TG-S	2:197330288	Intergenic region	206	100	GTGTATTAACCAATTTCTGGTACTCGGTTAGTGAAGGGCTAATTC <i>ACTCCAACGGAAGACAAGATCTGCTTTTT</i>
	9:35209886	BICD1	435	99.77	ACAATGAACTAAATGAATACTGACAGCAGGGTTTCTGATTTACT TATCTCATTATTGGAAGGGCTAATTCCTCCAACGAAGACAA
	11:107855778	Intergenic region	720	99.58	<i>AGCAGATCTTGTCTTCGTTGGGAGTGAATTAGCCCTTCCATACACAAAT</i> AAAGCAAATATCCAGGCATGGTGGCACGTGCTTGAAGTCCAG CT
TG-L	1:126737526	Intergenic region	820	98.66	<i>AAAAGCAGATCTTGTCTTCGTTGGGAGTGAATTAGCCCTTCCAGAATC</i> ATCCTTTTTTATGGCTCCATAGTATTCTATGGTGTATGTGTGCCA TATTTCTTTATCTAGTCTATCATTGATGGGCATTTGGGTGGCT AGGTTGCAGTGAGCCAAGATAGTGTCACTGAACTCCATCCTGGG CAACACAGCAAGACTGTGTCTCAAAAAACAAAATAGGCTGTGG <i>AAGGACTAATTCCTCCAACGAAGACAAGATCTGCTTTTTGCTGTACT</i> <i>GGGTCTCTCGTT</i>
	2:72750672	MA_M002_JSM116D85R	460	99.78	<i>TACAAGCAAAAAGCAGATCTTGTCTTCGTTGGGAGTGAATTAGCCCTTCC</i> AAAACCCCATTAACAAGGGAAAGGGGATAAAAAATAAATTTTT TT
	14:80829389	ZNF512	528	99.62	<i>GATCTGGTCTAACCAGAGAGACCCAGTACAAGCAAAAAGCAGATCTTGT</i> <i>CTTCGTTGGGAGTGAATTAGCCCTTCCAGGTTTCTGGTGTCTTTGA</i> TGACACACGATGTCTCGGAACAAA
	15:33065540	IL17RD	208	99.04	<i>CTTGTCTTCGTTGGGGTGAATTAGCCCTTCCAGATAGGAAACCCCAA</i> TTAAGTGAGGTACTATCTTCTCAAAGATTTTCACTTTTCA
TG-D1	6:47458599	TLK1	510	99.22	GAATTCACCTCTATATAATTCATCTATGTAACAAAACCACTCGT <i>ACCTGGAAGGGCTAATTCCTCCAACGAAGACGAGAT</i>
	7:67759963	Intergenic region	523	99.81	<i>CGGGCACACACTACTTGAAGAACCTAAAACATTCAGGAAAAGTGAAC</i> AGTCCCAACTTACAAGTGAATTTCTGACTATGAAAGA GA
TG-D2	2:110737191	LNPEP	705	100	<i>ATCTTGTCTTCGTTGGGAGTGAATTAGCCCTTCCAGATAGGAAACCCC</i> AATTAAGTGAGGTACTATCTTCTCAAAGATTTTCACTTTTCAT TAGCAGACTTCTGTTTTA
	6:47458599	TLK1	76	100	<i>TCTCTGGTTTTCCCTTTCGTTTTCAAGTCCCTGTTCCGGGCGCCACTGCTAG</i> <i>AGATTTCAAAGTTCACGAGCCCCAGGCACATGCTCAGCCCTTCT</i> CCAAGTTAATCATAAACAGGCAAGATAAACAGATGTCCAAGGA AA
	7:100483224	JAK1	155	100	<i>AAGCAAAAAGCAGATCTTGTCTTCGTTGGGAGTGAATTAGCCCTTCCAAA</i> ACCCCATTAACAAGGGAAAGGGGATAAAAAATAAATTTTTTTA
TG-J	14:80829389	ZNF512	46	100	TACCTGTGTGCGCCACCACCTGCCTAAGTTGACTCTTAGT <i>AGAGACGGGGTTCTGGAAGGGCTAATTCCTCCAACGAAGACAA</i>
	20:43696763	ZNF778	295	99.32	<i>CCAGTACAAGCAAAAAGCAGATCTTGTCTTCGTTGGGAGTGAATTAGCCC</i> <i>TTCCACTATGAAAGTAAATTTTCATGCATTACTTCTTTTATACC</i> CATAATAGCCACATAATAATAATTAGACATCCTTATTTTTTCAAGAA AAT
TG-D3	6:124325749	PIKFYVE	683	100	<i>AAAAGCAGATCTTGTCTTCGTTGGGAGTGAATTAGCCCTTCCATCAGGC</i> AACCACTATATCATTCTAATCCATTTTTA
	15:40004695	THOC7	155	100	

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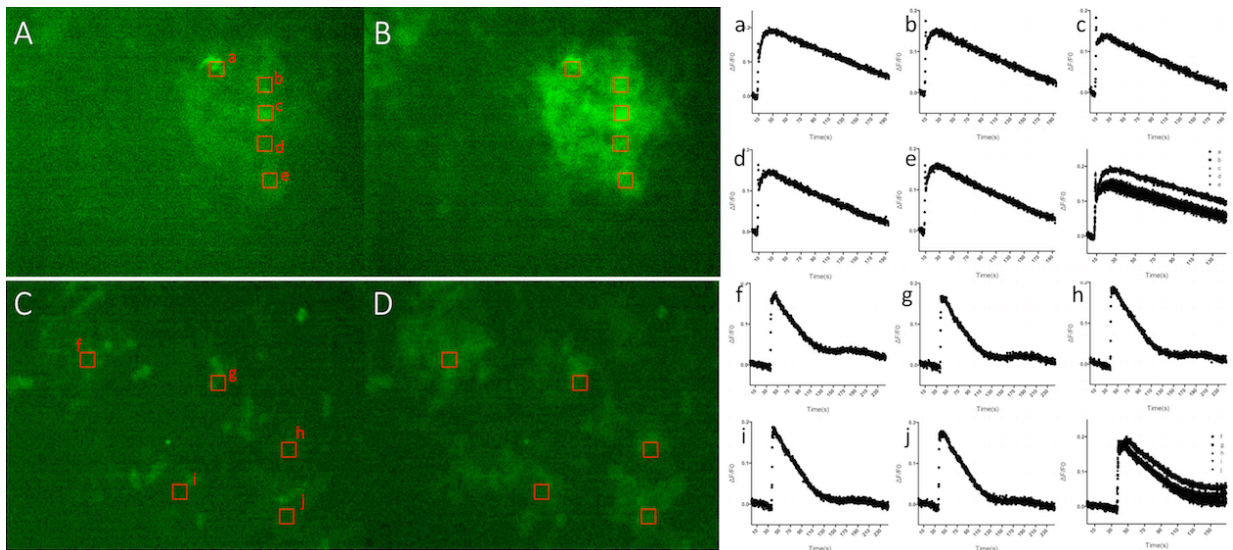
16 Supplementary Figure S1. Transgene expression in blood. Results of FACS analysis using whole
 17 peripheral blood cells and leukocyte subsets from transgenic marmosets. The percentage of
 18 GCaMP-positive cells is shown in the top right of each panel.

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22 Supplementary Figure S2. Stimulus evoked response of fibroblast cells derived from CMV-
23 mKO-GCaMP6s (TG-E) and Syn-mKO-GCaMP6s (TG-D1) transgenic marmosets. (A-B) Images
24 of GCaMP labeled cells derived from TG-E skin tissue before (A) and after (B) stimulation with
25 calcium chloride show robust changes in fluorescence after the increase in intracellular calcium
26 levels. (a-e) Time course of the changes in fluorescence in five example areas demarcated in A.
27 (C-D) Images of GCaMP labeled cells derived from TG-D1 spinal cord tissue before (C) and
28 after stimulations with calcium chloride. (f-j) Time course of the changes in fluorescence in five
29 example areas demarcated in in C.



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