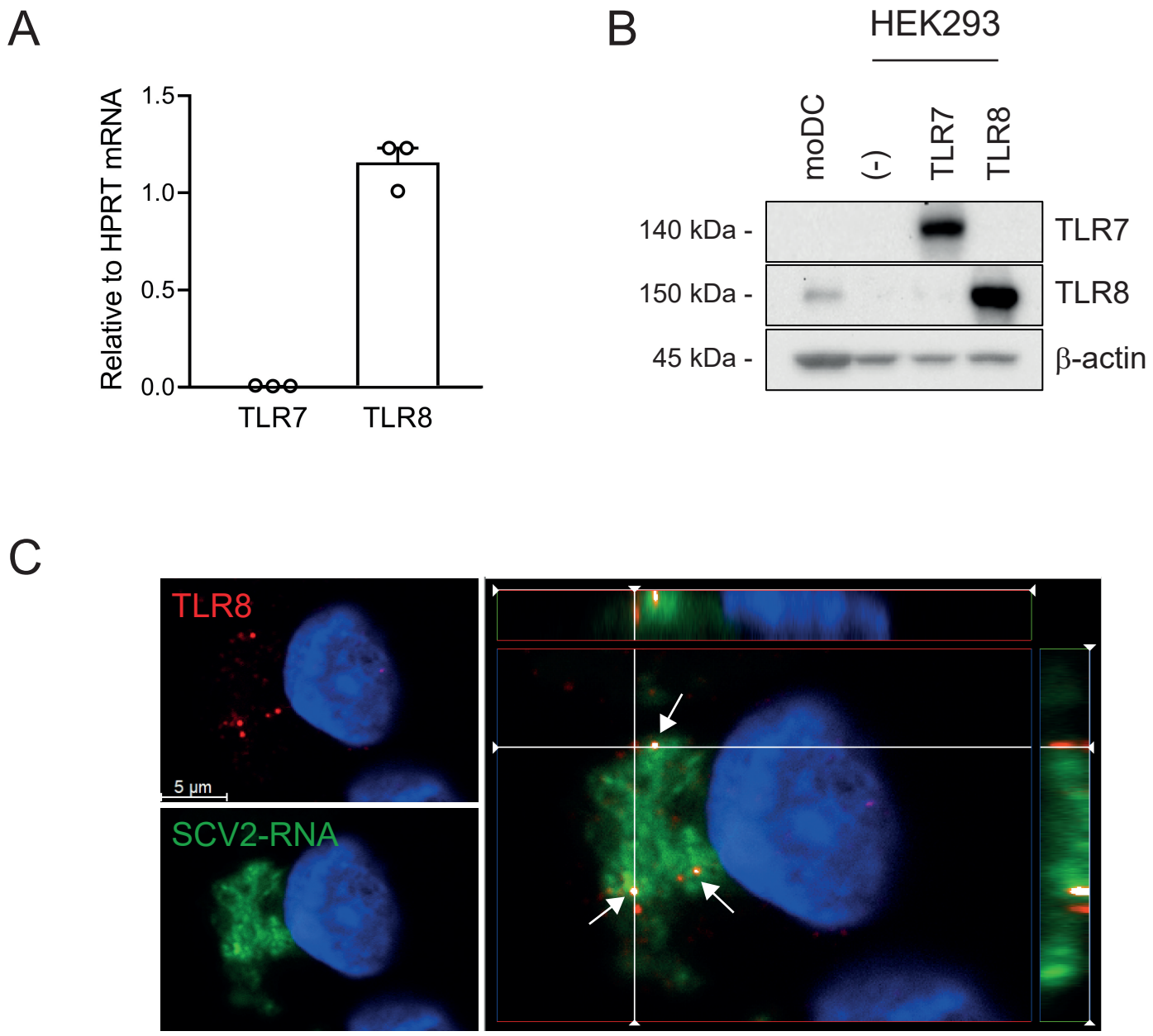
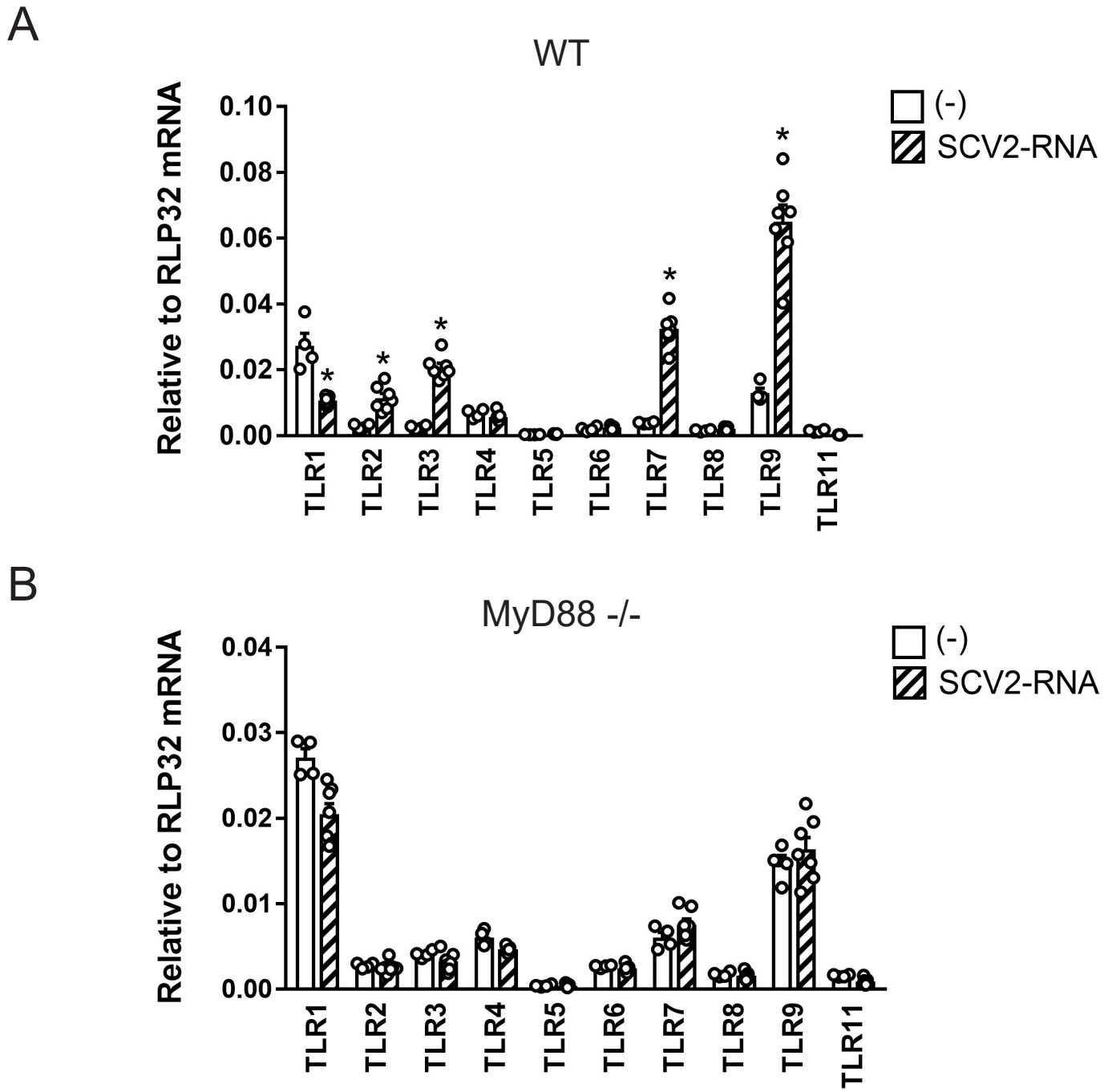


Supplemental Figure 1. TLR8 expression and SAMP colocalization in moDCs. (A) mRNA from moDCs at day 6 of culture was extracted to analyse the expression of TLR7 and TLR8 by qPCR. Data are expressed as mean ± SEM (n=3) of $2^{-\Delta Ct}$ relative to HPRT. (B) moDCs and HEK293 cells stably transfected with human TLR7, TLR8 or luciferase alone (-) were lysed and the expression of TLR7, TLR8 and β-actin was determined by Western blot. One representative fluorogram out of three is shown. (C) moDCs were stimulated with SCV2-RNA-Atto 488 for 15 minutes. After fixation and permeabilization, moDCs were stained with anti-TLR8 mAb (red) and DAPI (blue). Image on the right shows the orthogonal z reconstruction elaborated with AxioVision 3D. White dots correspond to TLR8 colocalizing with SCV2-RNA. This representative image depicts results obtained in one donor out of three; scale bar: 5 µm.



Supplemental Figure 2. SCV2-RNA stimulation affects TLR expression in WT mice. Expression of TLR mRNAs in splenocytes from WT (upper panel) or MyD88$^{-/-}$ mice (lower panel) stimulated with SCV2-RNA for 6 hours. Data are expressed as mean ± SEM ((-) n=4, SCV2-RNA n=7) of $2^{-\Delta Ct}$ relative to RPL32 of one representative experiment out of three. *P< 0.05 versus respective "(-)" by paired Student's *t* test.

Supplemental Table 1

Sequence number	Sequence	Start	Stop
1	TTTAAAATC**TGTGT**GGCTG	76	94
2	TAAAATC**TGTGT**GGCTGTC	78	96
3	C**TGTGT**GGCTGTCACTCGG	84	102
4	TTGCCTTTGGAGGC**TGTGT**	1476	1494
5	TGCCTTTGGAGGC**TGTGT**G	1477	1495
6	GCCTTTGGAGGC**TGTGTGT**	1478	1496
7	CCTTTGGAGGC**TGTGTGT**T	1479	1497
8	CTTTGGAGGC**TGTGTGT**TC	1480	1498
9	TTTGGAGGC**TGTGTGT**TCT	1481	1499
10	TGGAGGC**TGTGTGT**TCTCT	1483	1501
11	GAGGC**TGTGTGT**TCTCTTA	1485	1503
12	GGC**TGTGTGT**TCTCTTATG	1487	1505
13	GC**TGTGTGT**TCTCTTATGT	1488	1506
14	C**TGTGTGT**TCTCTTATGTT	1489	1507
15	**TGTGTGT**TCTCTTATGTTG	1490	1508
16	G**TGTGT**TCTCTTATGTTGG	1491	1509
17	**TGTGT**TCTCTTATGTTGGT	1492	1510
18	TAAATTTTTGGCTT**TGTGT**	2314	2332
19	AAATTTTTGGCTT**TGTGT**G	2315	2333
20	AATTTTTGGCTT**TGTGT**GC	2316	2334
21	ATTTTTGGCTT**TGTGT**GCT	2317	2335
22	TTTTTGGCTT**TGTGT**GCTG	2318	2336
23	TTTTGGCTT**TGTGT**GCTGA	2319	2337
24	TTGGCTT**TGTGT**GCTGACT	2321	2339
25	GGCTT**TGTGT**GCTGACTCT	2323	2341
26	TT**TGTGT**GCTGACTCTATC	2326	2344
27	**TGTGT**GCTGACTCTATCAT	2328	2346
28	ATTGTACAGAAAG**TGTGT**T	2410	2428
29	AATGAGTTCGCC**TGTGT**TG	2870	2888
30	ATGAGTTCGCC**TGTGT**TGT	2871	2889
31	TGAGTTCGCC**TGTGT**TGTG	2872	2890
32	GAGTTCGCC**TGTGT**TGTGG	2873	2891
33	GTTCGCC**TGTGT**TGTGGCA	2875	2893
34	CC**TGTGT**TGTGGCAGATGC	2880	2898
35	**TGTGT**TGTGGCAGATGCTG	2882	2900
36	AAGTGGGTGGTAGT**TGTGT**	3558	3576
37	AGTGGGTGGTAGT**TGTGT**T	3559	3577
38	GTGGGTGGTAGT**TGTGT**TT	3560	3578
39	TGGGTGGTAGT**TGTGT**TTT	3561	3579
40	GGGTGGTAGT**TGTGT**TTTA	3562	3580
41	GGTGGTAGT**TGTGT**TTTAA	3563	3581
42	GTGGTAGT**TGTGT**TTTAAG	3564	3582
43	TGGTAGT**TGTGT**TTTAAGC	3565	3583
44	GTAGT**TGTGT**TTTAAGCGG	3567	3585
45	GT**TGTGT**TTTAAGCGGACA	3570	3588
46	ATTCTTTAAGAGTT**TGTGT**	3744	3762
47	TTCTTTAAGAGTT**TGTGT**A	3745	3763
48	CTTTAAGAGTT**TGTGT**AGA	3747	3765
49	TTAAGAGTT**TGTGT**AGATA	3749	3767
50	AAGAGTT**TGTGT**AGATACT	3751	3769
51	GAGTT**TGTGT**AGATACTGT	3753	3771

52	AGTT**TGTGT**AGATACTGTT	3754	3772
53	GTT**TGTGT**AGATACTGTTC	3755	3773
54	TT**TGTGT**AGATACTGTTCG	3756	3774
55	T**TGTGT**AGATACTGTTCGC	3757	3775
56	ATTAATGCCTGTC**TGTGT**G	4426	4444
57	TAATGCCTGTC**TGTGT**GGA	4428	4446
58	ATGCCTGTC**TGTGT**GGAAA	4430	4448
59	GCCTGTC**TGTGT**GGAAACT	4432	4450
60	AGTCTTGAACGTGG**TGTGT**	5503	5521
61	TCTTGAACGTGG**TGTGT**AA	5505	5523
62	CGTGG**TGTGT**AAAACTTGT	5512	5530
63	GTGGTGTGTAAAACTTGTG	5513	5531
64	TGG**TGTGT**AAAACTTGTGG	5514	5532
65	GG**TGTGT**AAAACTTGTGGA	5515	5533
66	G**TGTGT**AAAACTTGTGGAC	5516	5534
67	TTTATTGCTACAAT**TGTGT**	6787	6805
68	TTATTGCTACAAT**TGTGT**A	6788	6806
69	ATCAACTTGTATGA**TGTGT**	7483	7501
70	CAACTTGTATGA**TGTGT**TA	7485	7503
71	AATTGGAAT**TGTGT**TAATT	7610	7628
72	TTGGAAT**TGTGT**TAATTGT	7612	7630
73	GGAAT**TGTGT**TAATTGTGA	7614	7632
74	GAAT**TGTGT**TAATTGTGAT	7615	7633
75	AAT**TGTGT**TAATTGTGATA	7616	7634
76	AT**TGTGT**TAATTGTGATAC	7617	7635
77	**TGTGT**TAATTGTGATACAT	7619	7637
78	TTAAAGTTACACT**TGTGT**T	8586	8604
79	TTACACT**TGTGT**TCCTTTT	8592	8610
80	ACACT**TGTGT**TCCTTTTTG	8594	8612
81	CACT**TGTGT**TCCTTTTTGT	8595	8613
82	ACT**TGTGT**TCCTTTTTGTT	8596	8614
83	CT**TGTGT**TCCTTTTTGTTG	8597	8615
84	T**TGTGT**TCCTTTTTGTTGC	8598	8616
85	**TGTGT**TCCTTTTTGTTGCT	8599	8617
86	ACATCAGCT**TGTGT**TTTGG	8993	9011
87	ATCAGCT**TGTGT**TTTGGCT	8995	9013
88	CAGCT**TGTGT**TTTGGCTGC	8997	9015
89	AGCT**TGTGT**TTTGGCTGCT	8998	9016
90	GCT**TGTGT**TTTGGCTGCTG	8999	9017
91	CT**TGTGT**TTTGGCTGCTGA	9000	9018
92	T**TGTGT**TTTGGCTGCTGAA	9001	9019
93	**TGTGT**TTTGGCTGCTGAAT	9002	9020
94	AGAAGCTGGTGTT**TGTGT**A	9241	9259
95	AAGCTGGTGTT**TGTGT**ATC	9243	9261
96	GCTGGTGTT**TGTGT**ATCTA	9245	9263
97	TGGTGTT**TGTGT**ATCTACT	9247	9265
98	GTGTT**TGTGT**ATCTACTAG	9249	9267
99	GTT**TGTGT**ATCTACTAGTG	9251	9269
100	TT**TGTGT**ATCTACTAGTGG	9252	9270
101	T**TGTGT**ATCTACTAGTGGT	9253	9271
102	**TGTGT**ATCTACTAGTGGTA	9254	9272
103	TAGATTATGAC**TGTGT**CTC	10509	10527
104	GATTATGAC**TGTGT**CTCTT	10511	10529

105	TTATGAC**TGTGT**CTCTTTT	10513	10531
106	ATGAC**TGTGT**CTCTTTTTG	10515	10533
107	TGAC**TGTGT**CTCTTTTTGT	10516	10534
108	GAC**TGTGT**CTCTTTTTGTT	10517	10535
109	AC**TGTGT**CTCTTTTTGTTA	10518	10536
110	C**TGTGT**CTCTTTTTGTTAC	10519	10537
111	**TGTGT**CTCTTTTTGTTACA	10520	10538
112	TGCCGTTTTAGATA**TGTGT**	10831	10849
113	GCCGTTTTAGATA**TGTGT**G	10832	10850
114	CCGTTTTAGATA**TGTGT**GC	10833	10851
115	CGTTTTAGATA**TGTGT**GCT	10834	10852
116	GTTTTAGATA**TGTGT**GCTT	10835	10853
117	TTTTAGATA**TGTGT**GCTTC	10836	10854
118	TTAGATA**TGTGT**GCTTCAT	10838	10856
119	AGATA**TGTGT**GCTTCATTA	10840	10858
120	AC**TGTGT**TATGTATGCATC	11307	11325
121	**TGTGT**TATGTATGCATCAG	11309	11327
122	AGAAC**TGTGT**ATGATGATG	11357	11375
123	AAC**TGTGT**ATGATGATGGT	11359	11377
124	AC**TGTGT**ATGATGATGGTG	11360	11378
125	C**TGTGT**ATGATGATGGTGC	11361	11379
126	**TGTGT**ATGATGATGGTGCT	11362	11380
127	AGGTATTGTTTTTA**TGTGT**	11533	11551
128	GGTATTGTTTTTA**TGTGT**G	11534	11552
129	GTATTGTTTTTA**TGTGTGT**	11535	11553
130	TATTGTTTTTA**TGTGTGT**T	11536	11554
131	ATTGTTTTTA**TGTGTGT**TG	11537	11555
132	TTGTTTTTA**TGTGTGT**TGA	11538	11556
133	TGTTTTTA**TGTGTGT**TGAG	11539	11557
134	GTTTTTA**TGTGTGT**TGAGT	11540	11558
135	TTTTA**TGTGTGT**TGAGTAT	11542	11560
136	TTTA**TGTGTGT**TGAGTATT	11543	11561
137	TTA**TGTGTGT**TGAGTATTG	11544	11562
138	TA**TGTGTGT**TGAGTATTGC	11545	11563
139	**TGTGTGT**TGAGTATTGCCC	11547	11565
140	**TGTGT**TGAGTATTGCCCTA	11549	11567
141	ATTGTGGGCTCAA**TGTGT**C	11923	11941
142	TTGTGGGCTCAA**TGTGT**CC	11924	11942
143	TGTGGGCTCAA**TGTGT**CCA	11925	11943
144	TGGGCTCAA**TGTGT**CCAGT	11927	11945
145	TGCAAGAGATGGT**TGTGT**T	12418	12436
146	AGATGGT**TGTGT**TCCCTTG	12424	12442
147	ATGGT**TGTGT**TCCCTTGAA	12426	12444
148	GT**TGTGT**TCCCTTGAACAT	12429	12447
149	CTAAT**TGTGT**TAAGATGTT	13140	13158
150	TAAT**TGTGT**TAAGATGTTG	13141	13159
151	AAT**TGTGT**TAAGATGTTGT	13142	13160
152	AT**TGTGT**TAAGATGTTGTG	13143	13161
153	T**TGTGT**TAAGATGT**TGTGT**	13144	13162
154	**TGTGT**TAAGATGT**TGTGT**A	13145	13163
155	GTGTTAAGATGT**TGTGT**AC	13146	13163
156	AAT**TGTGT**TAACTGTTTGG	14329	14347
157	AT**TGTGT**TAACTGTTTGGA	14330	14348

158	T**TGTGT**TAACTGTTTGGAT	14331	14349
159	**TGTGT**TAACTGTTTGGATG	14332	14350
160	TTTAAGGAATTACT**TGTGT**	14542	14560
161	GGAATTACT**TGTGT**ATGCT	14547	14565
162	AATTACT**TGTGT**ATGCTGC	14549	14567
163	TTACT**TGTGT**ATGCTGCTG	14551	14569
164	ACT**TGTGT**ATGCTGCTGAC	14553	14571
165	TTCTATGACTTTGC**TGTGT**	14695	14713
166	CTATGACTTTGC**TGTGT**CT	14697	14715
167	TGACTTTGC**TGTGT**CTAAG	14700	14718
168	ACTTTGC**TGTGT**CTAAGGG	14702	14720
169	TTTGC**TGTGT**CTAAGGGTT	14704	14722
170	TTGC**TGTGT**CTAAGGGTTT	14705	14723
171	TGC**TGTGT**CTAAGGGTTTC	14706	14724
172	GC**TGTGT**CTAAGGGTTTCT	14707	14725
173	C**TGTGT**CTAAGGGTTTCTT	14708	14726
174	**TGTGT**CTAAGGGTTTCTTT	14709	14727
175	GTGAAATGGTCA**TGTGT**GG	15431	15449
176	AAATGGTCA**TGTGT**GGCGG	15434	15452
177	ATGGTCA**TGTGT**GGCGGTT	15436	15454
178	GGTCA**TGTGT**GGCGGTTCA	15438	15456
179	TCTGACGATGCTGT**TGTGT**	15715	15733
180	CTGACGATGCTGT**TGTGT**G	15716	15734
181	TGACGATGCTGT**TGTGTGT**	15717	15735
182	GACGATGCTGT**TGTGTGT**T	15718	15736
183	ACGATGCTGT**TGTGTGT**TT	15719	15737
184	CGATGCTGT**TGTGTGT**TTC	15720	15738
185	ATGCTGT**TGTGTGT**TTCAA	15722	15740
186	GCTGT**TGTGTGT**TTCAATA	15724	15742
187	TGT**TGTGTGT**TTCAATAGC	15726	15744
188	G**TGTGT**TTCAATAGCACTT	15730	15748
189	CAGGGTGATGATTA**TGTGT**	15904	15922
190	AGGGTGATGATTA**TGTGT**A	15905	15923
191	GGGTGATGATTA**TGTGT**AC	15906	15924
192	GGTGATGATTA**TGTGT**ACC	15907	15925
193	TGATGATTA**TGTGT**ACCTT	15909	15927
194	GATTA**TGTGT**ACCTTCCTT	15913	15931
195	AGGCTGTTGGGGCT**TGTGT**	16235	16253
196	GGCTGTTGGGGCT**TGTGT**T	16236	16254
197	GCTGTTGGGGCT**TGTGT**TC	16237	16255
198	CTGTTGGGGCT**TGTGT**TCT	16238	16256
199	TGTTGGGGCT**TGTGT**TCTT	16239	16257
200	GTTGGGGCT**TGTGT**TCTTT	16240	16258
201	TTGGGGCT**TGTGT**TCTTTG	16241	16259
202	TGGGGCT**TGTGT**TCTTTGC	16242	16260
203	GGGCT**TGTGT**TCTTTGCAA	16244	16262
204	GGCT**TGTGT**TCTTTGCAAT	16245	16263
205	GCT**TGTGT**TCTTTGCAATT	16246	16264
206	CT**TGTGT**TCTTTGCAATTC	16247	16265
207	CATTAGTTTTCCAT**TGTGT**	16470	16488
208	ATTAGTTTTCCAT**TGTGT**G	16471	16489
209	TTAGTTTTCCAT**TGTGT**GC	16472	16490
210	TAGTTTTCCAT**TGTGT**GCT	16473	16491

211	GTTTTCCAT**TGTGT**GCTAA	16475	16493
212	TTTCCAT**TGTGT**GCTAATG	16477	16495
213	TCCAT**TGTGT**GCTAATGGA	16479	16497
214	**TGTGT**TGGTAGCGATAATG	16525	16543
215	TTTCAATTCAG**TGTGT**AGA	17499	17517
216	TTCAG**TGTGT**AGACTTATG	17505	17523
217	CTGAAGGTTTA**TGTGT**TGA	18143	18161
218	GAAGGTTTA**TGTGT**TGACA	18145	18163
219	AGGTTTA**TGTGT**TGACATA	18147	18165
220	TA**TGTGT**TGACATACCTGG	18152	18170
221	AGGTTCATCTAAG**TGTGT**G	20475	20493
222	GGTTCATCTAAG**TGTGTGT**	20476	20494
223	GTTCATCTAAG**TGTGTGT**G	20477	20495
224	TCATCTAAG**TGTGTGTGT**T	20479	20497
225	ATCTAAG**TGTGTGTGT**TCT	20481	20499
226	CTAAG**TGTGTGTGT**TCTGT	20483	20501
227	AAG**TGTGTGTGT**TCTGTTA	20485	20503
228	AG**TGTGTGTGT**TCTGTTAT	20486	20504
229	G**TGTGTGT**GTTCTGTTATT	20487	20505
230	**TGTGTGT**GTTCTGTTATTG	20488	20506
231	G**TGTGTGT**TCTGTTATTGA	20489	20507
232	**TGTGTGT**TCTGTTATTGAT	20490	20508
233	G**TGTGT**TCTGTTATTGATT	20491	20509
234	**TGTGT**TCTGTTATTGATTT	20492	20510
235	AGTCTCTAGTCAG**TGTGT**T	21592	21610
236	TCTCTAGTCAG**TGTGT**TAA	21594	21612
237	TCTAGTCAG**TGTGT**TAATC	21596	21614
238	TAGTCAG**TGTGT**TAATCTT	21598	21616
239	ATCTTAGGGAATT**TGTGT**T	22125	22143
240	TCTTAGGGAATT**TGTGT**TT	22126	22144
241	CTTAGGGAATT**TGTGT**TTA	22127	22145
242	TAGGGAATT**TGTGT**TTAAG	22129	22147
243	GGGAATT**TGTGT**TTAAGAA	22131	22149
244	ATT**TGTGT**TTAAGAATATT	22135	22153
245	TT**TGTGT**TTAAGAATATTG	22136	22154
246	T**TGTGT**TTAAGAATATTGA	22137	22155
247	**TGTGT**TTAAGAATATTGAT	22138	22156
248	C**TGTGT**TGCTGATTATTCT	22642	22660
249	**TGTGT**TGCTGATTATTCTG	22643	22661
250	ATGTCAGAG**TGTGT**ACTTG	24647	24665
251	GTCAGAG**TGTGT**ACTTGGA	24649	24667
252	ACATT**TGTGT**CTGGTAACT	24920	24938
253	ATT**TGTGT**CTGGTAACTGT	24922	24940
254	TT**TGTGT**CTGGTAACTGTG	24923	24941
255	T**TGTGT**CTGGTAACTGTGA	24924	24942
256	**TGTGT**CTGGTAACTGTGAT	24925	24943
257	TGGAGTAAAAGAC**TGTGT**T	25977	25995
258	GAGTAAAAGAC**TGTGT**TGT	25979	25997
259	GTAAAAGAC**TGTGT**TGTAT	25981	25999
260	**TGTGT**TGTATTACACAGTT	25990	26008
261	ACTGCGCTTCGAT**TGTGT**G	26347	26365
262	CTGCGCTTCGAT**TGTGT**GC	26348	26366
263	TGCGCTTCGAT**TGTGT**GCG	26349	26367

264	CGCTTCGAT**TGTGT**GCGTA	26351	26369
265	CTTCGAT**TGTGT**GCGTACT	26353	26371
266	TCGAT**TGTGT**GCGTACTGC	26355	26373
267	GAT**TGTGT**GCGTACTGCTG	26357	26375
268	T**TGTGT**GCGTACTGCTGCA	26359	26377
269	CCAAGAG**TGTGT**TAGAGGT	27453	27471
270	AG**TGTGT**AACATTAGGGAG	29687	29705
271	G**TGTGT**AACATTAGGGAGG	29688	29706

Supplemental Table 1

List of SARS-CoV-2 GU-rich sequences enriched in Interferon Induction Motif (IIM)

The reference SARS-CoV-2 genome (NC_045512, positive strand) was scanned for GU-rich ssRNA as explained in Material and Methods. Within the identified 491 GU-rich sequences, 271 were further selected based on their content of at least one "UGUGU" Interferon Induction Motif (IIM). Base numbering is based on the SARS-CoV-2 reference genome NC_045512.

Gene Name	Species	Primer Sequence (5'-3')	
RPL32	mouse	Forward Reverse	GCTGCCATCTGTTTTACGG TGACTGGTGCCTGATGAACT
TLR1	mouse	Forward Reverse	CTGTCTTCAGATGCTTACCTCC GGATGCTACATTGAGTTCCTGC
TLR2	mouse	Forward Reverse	CAGCTCACCGATGAAGAAGCTG GAACTCTACCTCCGACAGTTCC
TLR3	mouse	Forward Reverse	CGAACCTGACAGAACTCGATC TTGGAGGTTCTCCAGTTGGAC
TLR4	mouse	Forward Reverse	CACGTCCATCGGTTGATCTTGG AGTCCTTCCATGATAGAGGGTTC
TLR5	mouse	Forward Reverse	TGCTAACAAGCTGACCGTGCTC TTCACAGTTGCAGACGAACTCG
TLR6	mouse	Forward Reverse	GAGCTGAGAGTTCTGAGACTC CCGATTGTGTGAGACATCCAG
TLR7	mouse	Forward Reverse	TGATCCTGGCCTATCTCTGAC CGTGTCCACATCGAAAACAC
TLR8	mouse	Forward Reverse	TGGCATTTACACCCTCACAGAG CATTCCACAAACGGTCAAGACG
TLR9	mouse	Forward Reverse	CATCACCTGAGCCATCTGGAAG GAGGTTGACCAGACCTTGGAAC
TLR11	mouse	Forward Reverse	TCTCACCAGTTTCATTCTGCTGC GAGTGTCCAGAGGTGATGAAGC
TNF-α	mouse	Forward Reverse	TGCCTATGTCTCAGCCTCTTC GAGGCCATTTGGGAACTTCT
IL-1β	mouse	Forward Reverse	TGTAATGAAAGACGGCACACC TCTTCTTTGGGTATTGCTTGG
IL-6	mouse	Forward Reverse	GCTACCAAACTGGATATAATCAGGA CCAGGTAGCTATGGTACTCCAGAA
IFN-α4	mouse	Forward Reverse	TCAAGCCATCCTTGTGCTAA GTCTTTTGATGTGAAGAGGTT
IFN-γ	mouse	Forward Reverse	ATCTGGAGGAACTGGCAAAA TTCAAGACTTCAAAGAGTCTGAGGTA
CCL3	mouse	Forward Reverse	TGCCTGCTGCTTCTCCTACAGC CCCAGGTCTCTTTGGAGTCAGC
CCL4	mouse	Forward Reverse	TGTGCTCCAGGGTTCTCAGCAC GGGTTAGCACAGATCTGTCTGC
CCL20	mouse	Forward Reverse	AACTGGGTGAAAAGGGCTGT GTCCAATTCCATCCCAAAAA
CCL22	mouse	Forward Reverse	TCTTGCTGTGGCAATTCAGA GAGGGTGACGGATGTAGTCC
CXCL10	mouse	Forward Reverse	CGTCATTTTCTGCCTCATCCTG CCGTCATCGATATGGATGCAGT
TRAIL	mouse	Forward Reverse	CTCACATTACTGGGATCACTCG CTCCCAGGATTCAATCTTCTGG
Granzyme B	mouse	Forward Reverse	CCCAAAGACCAAACGTGCTTCC AAGCACGTGGAGGTGAACCATC
HPRT	human	Forward Reverse	CCAGTCAACAGGGGACATAAA CACAATCAAGACATTCTTTCCAGT

TLR7	human	Forward Reverse	TTAACCAATTGCTTCCGTGTC GGTGCCCACACTCAATCTG
TLR8	human	Forward Reverse	TGTGGTTGTTTTCTGGATTCAA GCTCGCATGGCTTACATGA

Supplemental Table 2. Primer list used for qPCR.