

Library Number	RMK009
Library Name	Primary Immunodeficiency Disorders (PID) Library
Old Document Name	190625_PID library (Brie, Saara)
Library Purpose	CRISPR/Cas9 Knockout of genes from Primary Immunodeficiency Disorder (PID or PIDD, now called IEI) pathway in mouse T cells
Location	Main lab, -20, PID BRIE library
Designer Name	Saara Kaviany
Designing Date	6/1/2019
Design Reference	IUIS List of IEI
Usage Reference	n/a

Species	Mouse (Mus musculus)
Total Gene #	36
Total Target #	154
Gene Group	
1. Negative Controls	10
2. Positive Controls	n/a
3. PID gene	36
Target Number	
1. Negative Controls	10
2. Positive Controls	n/a
3. PID gene	36*4=144

Note: Primary Immunodeficiency Disorders (PIDs or PIDDs, now the literature has shifted to IEI)

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
1	Adam17	GGTGTGTGGCAACTCCAGGG
2	Adam17	ACACGTCGTGGGATAATGCA
3	Adam17	CATCGACGTACGGCACACAC
4	Adam17	GCCCCAAATGAGGACCAAGG
5	Aire	TGTGCCGTGTGCCACGACGG
6	Aire	CTCTCCAGGAATTCAGACCA
7	Aire	ACAGAACCTGTCCCAGCCTG
8	Aire	GGTAGAGATGAGCAGAAAGT
9	Xiap	TTTCAGACACCATATACCCG
10	Xiap	AGCACTAGCTAACTCTCTGG
11	Xiap	CTTGGGAACAGCATGCGAAG
12	Xiap	ATGGACATCCTCAGTTAACA
13	Casp8	GATTATGAAAGATCAAGCAC
14	Casp8	CTTCCTAGACTGCAACCGAG
15	Casp8	ATGATCAGACAGTATCCCCG
16	Casp8	CAAGAAGCAGGAGACCATCG
17	Fadd	TAGATCGTGTGCGCGCAGCG
18	Fadd	AAGCTGGAGCGCGTGCAGAG
19	Fadd	TTCGTTTGCTCACGCGCTCG
20	Fadd	GCGCCTGGACGACTTCGAGG
21	Il10	GCTAACCGACTCCTTAATGC
22	Il10	AACTGCACCCACTTCCCAGT
23	Il10	AAGGAGCATTTGAATTCCCT
24	Il10	ACTGGCATGAGGATCAGCAG
25	Il10ra	GCAGTGTTTACTTATCACGA
26	Il10ra	GTGGGGACAACACGGACAGT
27	Il10ra	GGTGAACGTTGTGAGATCAC
28	Il10ra	TCTGGCTTCAAACCACACAT
29	Il10rb	TGGCGGATGAACATTCCGGAG
30	Il10rb	ATTTCAAGAACATTCTACAG
31	Il10rb	CGGAGGACCTCAGAGTCGTA
32	Il10rb	AGAGAAGTCGCACTGAGTCG
33	Il1rn	TTCTCCAGAAAAGATAGACA
34	Il1rn	GTGTTCTTGGGCATCCACGG
35	Il1rn	CTGCCTCTGAATGAAACAGA
36	Il1rn	CTTGATATCATCTCCAGACT
37	Il2ra	GTGTCTGTATGACCCACCCG
38	Il2ra	ATCTTGACAGATGCTAATAGC
39	Il2ra	GAGAGGTTTCCGAAGACTAA
40	Il2ra	GAATCTTCATGTTTCCAAGG

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
41	Itch	TCCCGCACATAGGCTATCTG
42	Itch	AAAACATAATTTACTCGTAG
43	Itch	GCCAAGCTCCCCTACCACCT
44	Itch	ACAACACTCGGATTACTCAG
45	Itk	CAGCCCCAAGCGCTACTACG
46	Itk	GTAAGCCTTCTCATACCCCG
47	Itk	TCAGGAACCTGAAGAAACCC
48	Itk	TTGCTCCAGACTGTGAGAGT
49	Psmb8	CCGGAGCTCGCACTTCCCCG
50	Psmb8	ACATGATGCTGCAGTACCGG
51	Psmb8	CTCGCCTTCAAGTTCCAGCA
52	Psmb8	AGGTTGTATTATCTTCCGGAA
53	Mvk	AGCGTCAATTTACCCAACAT
54	Mvk	GTGGTCGGAACTTCCCCCG
55	Mvk	CAAGGTCCCGCGGAGTACCA
56	Mvk	TCTGAAGTCAATCAACAAGT
57	Pdcd1	CAATACAGGGATACCCACTA
58	Pdcd1	GACACACGGCGCAATGACAG
59	Pdcd1	CAGCTTGTCCAAGTGGTCGG
60	Pdcd1	GCTCAAACCATTACAGAAGG
61	Pepd	CACAAATCGGATCTCCAGCG
62	Pepd	CTGCTATGGTGTGATCGATG
63	Pepd	GCCCTGCAACACGACAGCTG
64	Pepd	CTTGCTAATGCCCTCGAAGG
65	Prf1	GTTCGTGCCAGGTGTATGGA
66	Prf1	TGCCACAGGTAGGCGCTGTG
67	Prf1	TCAATAACGACTGGCGTGTG
68	Prf1	GGTAGGAGACTGCCTGAACG
69	Prkcd	AGAAGGTGGCGATAAACTCG
70	Prkcd	TTATAAACCTTGAATCGGTG
71	Prkcd	AGCCCACCATGTATCCTGAG
72	Prkcd	CGATGATGTAGAGTGTACCA
73	Rasgrp1	ACGTACAGATATCCGTCGGA
74	Rasgrp1	TAAGAACTATGATCTCGACC
75	Rasgrp1	ACAGTTGGTTATTCCGACAC
76	Rasgrp1	TGACCTTATTGATCTCATGT
77	Rheb	AACAACTGAATTGTCAATG
78	Rheb	CCATATCCAACAACCTTGCCA
79	Rheb	TTCAGCTTGTAGACACAGCG
80	Rheb	TCATAGGATACCTATTATGT

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
81	Sh2d1a	AGAAGCTCTTACTCGCTACC
82	Sh2d1a	GATGCAGTGA CTGTGTACCA
83	Sh2d1a	AACAGGTTCTTGAGTGCCG
84	Sh2d1a	CACACAGGCAGTACACGCCA
85	Cd27	TCTCTCCAGACTACCAACC
86	Cd27	TGCTGCATACCTGTGCCATG
87	Cd27	AGACAAACACTACTGGACTG
88	Cd27	CTCAGGTACATTCTTTGTGA
89	Cd70	TTGGGAAGGTCCTTCACACA
90	Cd70	AGCTGTA ACTCAGCTGTGTG
91	Cd70	AAGGACCCCACTGCGCTG
92	Cd70	CATCTGCGTATCCATCAAGA
93	Tsc2	TGAACCACATGGCTATGACG
94	Tsc2	CACAGGGTGATAATGAACAG
95	Tsc2	CAGCTCCAAAGACCCTTGAG
96	Tsc2	CTGATCCTAGCACACATGTG
97	Zap70	CAACGGCACGTACGCCATCG
98	Zap70	GAAGCGAGAGAATCTCCTCG
99	Zap70	TCGACAACCCCTACATCGTG
100	Zap70	CGCGCACCATAGCATCACGC
101	Sh3bp2	TCAGCAAGAAGCACCGAACA
102	Sh3bp2	GAGGTGAACGAGTGGGCACG
103	Sh3bp2	ACCTGGAGCCTGATTCCCCG
104	Sh3bp2	TGGGTACATTGCTCATTGGG
105	Mefv	TCTGATAACCTACTACGGGG
106	Mefv	AAGGAGGGTACCTTCACAAG
107	Mefv	ACCAAAGGAAGGATCAGAG
108	Mefv	TCTGAATGGAAGGACTACGG
109	Lpin2	GGATACTCACGTTTCTAATG
110	Lpin2	GGTTATATATCCGGATCACG
111	Lpin2	TGCAGGTCACCAAAGAGAA
112	Lpin2	AACCTGGATCCGTGTCACTG
113	Magt1	TGTGTGTGCGATCGCAGCGG
114	Magt1	CAGCTGAGCAGATTGCCCGG
115	Magt1	TTATGCTGGACCCCTAATGT
116	Magt1	GTGGAGCTTTAACAAGACGA
117	Unc13d	AATCTGGTACAGGACGTCAT
118	Unc13d	ACAGAGACCTACCCAGACCG
119	Unc13d	TGGCTGGCTGAAACCAGCGG
120	Unc13d	GCAGCCCTGTGTCCCGACGT

Number	Target.Gene.Symbol	sgRNA.Target.Sequence
121	Slc29a3	AATGATGGCCATGCACGCGA
122	Slc29a3	GGGAAACTGCGCAGAACCCG
123	Slc29a3	CAAGGAAGACTGCTGCCATG
124	Slc29a3	ACCAGAAAACACTCGAACTG
125	Lrba	GACCGTCCCAATGAACTCAG
126	Lrba	GTGTGGCGAGTGGACGAAGA
127	Lrba	ATAGTTACCATGTACCACTG
128	Lrba	CAGATGCAGTAGACCAACAA
129	Rltpr	GCCTGACTTACCATGAAGGG
130	Rltpr	CAACCAAGTAGACTCTACTT
131	Rltpr	AGACCACCCTGGATACCACA
132	Rltpr	ACATGCGCCTGTCAATCACT
133	Ap1s3	CCCACTCCCTGACAAGGAG
134	Ap1s3	TCCAGACCGTCCTCTCTCGT
135	Ap1s3	TCAGTCGACAAGGGAAGCTG
136	Ap1s3	TAATATCCAGCTCACAGACC
137	Ctps	ATTGGCCATTAACCACAAGC
138	Ctps	ATACCAGTACGTCATTAACA
139	Ctps	GCCCACAAGAGCGATCGAGC
140	Ctps	TTAATACCCGTAGACGAAGA
141	Tpp2	CACACCAAGCAGTCATATAC
142	Tpp2	ATTGATATCATTGATACAAC
143	Tpp2	ATAGGCCAATAAACTAATCA
144	Tpp2	TGGTTATGACTTCTATCCAA
145	NTC	AAAAAGTCCGCGATTACGTC
146	NTC	AAAACGGCTCGATCGGTGAT
147	NTC	AAAACGTAATTATACCGAGC
148	NTC	AAAATTGCACCTTCCCGGCC
149	NTC	AAACCCCGCGCGGAGCGTC
150	NTC	AAACCTAGCGTAGATTCGGC
151	NTC	AAACGAGGCTGTTCGTACAC
152	NTC	AAACTCATACGTAGCGAATC
153	NTC	AAACTCCCGTGTCAACCGAT
154	NTC	AAAGACGTGCATTCAGCGAG

Original Doc Name: 190625_PID library (Brie, Saara)

identifier	sgRNA.Target.Sequence	Target.Gene.Symbol
Adam17_1	GGTGTGTGGCAACTCCAGGG	Adam17
Adam17_2	ACACGTCGTGGGATAATGCA	Adam17
Adam17_3	CATCGACGTACGGCACACAC	Adam17
Adam17_4	GCCCCAAATGAGGACCAAGG	Adam17
Aire_1	TGTGCCGTGTGCCACGACGG	Aire
Aire_2	CTCTCCAGGAATTCAGACCA	Aire
Aire_3	ACAGAACCTGTCCCAGCCTG	Aire
Aire_4	GGTAGAGATGAGCAGAAAGT	Aire
Xiap_1	TTTCAGACACCATATACCCG	Xiap
Xiap_2	AGCACTAGCTAACTCTCTGG	Xiap
Xiap_3	CTTGGGAACAGCATGCGAAG	Xiap
Xiap_4	ATGGACATCCTCAGTTAACA	Xiap
Casp8_1	GATTATGAAAGATCAAGCAC	Casp8
Casp8_2	CTTCCTAGACTGCAACCGAG	Casp8
Casp8_3	ATGATCAGACAGTATCCCCG	Casp8
Casp8_4	CAAGAAGCAGGAGACCATCG	Casp8
Fadd_1	TAGATCGTGTGCGGCAGCG	Fadd
Fadd_2	AAGCTGGAGCGCGTGCAGAG	Fadd
Fadd_3	TTCGTTTGCTCACGCGCTCG	Fadd
Fadd_4	GCGCCTGGACGACTTCGAGG	Fadd
Il10_1	GCTAACCGACTCCTTAATGC	Il10
Il10_2	AACTGCACCCACTTCCCAGT	Il10
Il10_3	AAGGAGCATTGGAATTCCCT	Il10
Il10_4	ACTGGCATGAGGATCAGCAG	Il10
Il10ra_1	GCAGTGTTTACTTATCACGA	Il10ra
Il10ra_2	GTGGGGACAACACGGACAGT	Il10ra
Il10ra_3	GGTGAACGTTGTGAGATCAC	Il10ra
Il10ra_4	TCTGGCTTCAAACCACACAT	Il10ra
Il10rb_1	TGGCGGATGAACATTCGGAG	Il10rb
Il10rb_2	ATTTCAAGAACATTCTACAG	Il10rb
Il10rb_3	CGGAGGACCTCAGAGTCGTA	Il10rb
Il10rb_4	AGAGAAGTCGCACTGAGTCG	Il10rb
Il1rn_1	TTCTCCAGAAAAGATAGACA	Il1rn
Il1rn_2	GTGTTCTTGGGCATCCACGG	Il1rn
Il1rn_3	CTGCCTCTGAATGAAACAGA	Il1rn
Il1rn_4	CTTGATATCATCTCCAGACT	Il1rn
Il2ra_1	GTGTCTGTATGACCCACCCG	Il2ra
Il2ra_2	ATCTTGACAGATGCTAATAGC	Il2ra
Il2ra_3	GAGAGGTTTCCGAAGACTAA	Il2ra

identifier	sgRNA.Target.Sequence	Target.Gene.Symbol
Il2ra_4	GAATCTTCATGTTTCCAAGG	Il2ra
Itch_1	TCCCGCACATAGGCTATCTG	Itch
Itch_2	AAAACATAATTTACTCGTAG	Itch
Itch_3	GCCAAGCTCCCCTACCACCT	Itch
Itch_4	ACAACACTCGGATTACTCAG	Itch
Itk_1	CAGCCCCAAGCGCTACTACG	Itk
Itk_2	GTAAGCCTTCTCATACCCCG	Itk
Itk_3	TCAGGAACCTGAAGAAACCC	Itk
Itk_4	TTGCTCCAGACTGTGAGAGT	Itk
Psmb8_1	CCGGAGCTCGCACTTCCCCG	Psmb8
Psmb8_2	ACATGATGCTGCAGTACCGG	Psmb8
Psmb8_3	CTCGCCTTCAAGTTCAGCA	Psmb8
Psmb8_4	AGGTTGTATTATCTTCGGAA	Psmb8
Mvk_1	AGCGTCAATTTACCCAACAT	Mvk
Mvk_2	GTGGTCGGAAGTTCCCCCG	Mvk
Mvk_3	CAAGGTCCCGCGGAGTACCA	Mvk
Mck_4	TCTGAAGTCAATCAACAAGT	Mvk
Pdcd1_1	CAATACAGGGATACCCACTA	Pdcd1
Pdcd1_2	GACACACGGCGCAATGACAG	Pdcd1
Pdcd1_3	CAGCTTGCCAAGTGGTCGG	Pdcd1
Pdcd1_4	GCTCAAACCATTACAGAAGG	Pdcd1
Pepd_1	CACAAATCGGATCTCCAGCG	Pepd
Pepd_2	CTGCTATGGTGTGTCATCGATG	Pepd
Pepd_3	GCCCTGCAACACGACAGCTG	Pepd
Pepd_4	CTTGCTAATGCCCTCGAAGG	Pepd
Prf1_1	GTTTCGTGCCAGGTGTATGGA	Prf1
Prf1_2	TGCCACAGGTAGGCGCTGTG	Prf1
Prf1_3	TCAATAACGACTGGCGTGTG	Prf1
Prf1_4	GGTAGGAGACTGCCTGAACG	Prf1
Prkcd_1	AGAAGGTGGCGATAAACTCG	Prkcd
Prkcd_2	TTATAAACCTTGAATCGGTG	Prkcd
Prkcd_3	AGCCCACCATGTATCCTGAG	Prkcd
Prkcd_4	CGATGATGTAGAGGTGTACCA	Prkcd
Rasgrp1_1	ACGTACAGATATCCGTCGGA	Rasgrp1
Rasgrp1_2	TAAGAAGTATGATCTCGACC	Rasgrp1
Rasgrp1_3	ACAGTTGGTTATTCCGACAC	Rasgrp1
Rasgrp1_4	TGACCTTATTGATCTCATGT	Rasgrp1
Rheb_1	AACAACTGAATTGTCAATG	Rheb
Rheb_2	CCATATCCAACAAGTTGCCA	Rheb
Rheb_3	TTCAGCTTGTAGACACAGCG	Rheb

identifier	sgRNA.Target.Sequence	Target.Gene.Symbol
Rheb_4	TCATAGGATACCTATTATGT	Rheb
Sh2d1a_1	AGAAGCTCTTACTCGCTACC	Sh2d1a
Sh2d1a_2	GATGCAGTGACTGTGTACCA	Sh2d1a
Sh2d1a_3	AACAGGTTCTTGAGTGCCG	Sh2d1a
Sh2d1_4	CACACAGGCAGTACACGCCA	Sh2d1a
Cd27_1	TCTCTCCAGACTACCACACC	Cd27
Cd27_2	TGCTGCATACCTGTGCCATG	Cd27
Cd27_3	AGACAAACACTACTGGACTG	Cd27
Cd27_4	CTCAGGTACATTCTTTGTGA	Cd27
Cd70_1	TTGGGAAGGTCCTTCACACA	Cd70
Cd70_2	AGCTGTAACCTCAGCTGTGTG	Cd70
Cd70_3	AAGGACCCCACTGCGCTG	Cd70
Cd70_4	CATCTGCGTATCCATCAAGA	Cd70
Tsc2_1	TGAACCACATGGCTATGACG	Tsc2
Tsc2_2	CACAGGGTGATAATGAACAG	Tsc2
Tsc2_3	CAGCTCCAAAGACCCTTGAG	Tsc2
Tsc2_4	CTGATCCTAGCACACATGTG	Tsc2
Zap70_1	CAACGGCACGTACGCCATCG	Zap70
Zap70_2	GAAGCGAGAGAATCTCCTCG	Zap70
Zap70_3	TCGACAACCCCTACATCGTG	Zap70
Zap70_4	CGCGCACCATAGCATCACGC	Zap70
Sh3bp2_1	TCAGCAAGAAGCACCGAACA	Sh3bp2
Sh3bp2_2	GAGGTGAACGAGTGGGCACG	Sh3bp2
Sh3bp2_3	ACCTGGAGCCTGATTCCCCG	Sh3bp2
Sh3bp2_4	TGGGTACATTGCTCATTGGG	Sh3bp2
Mefv_1	TCTGATAACCTACTACGGGG	Mefv
Mefv_2	AAGGAGGGTACCTTCACAAG	Mefv
Mefv_3	ACCAAAGGAAGGATCAGAG	Mefv
Mefv_4	TCTGAATGGAAGGACTACGG	Mefv
Lpin2_1	GGATACTCACGTTTCTAATG	Lpin2
Lpin2_2	GGTTATATATCCGGATCACG	Lpin2
Lpin2_3	TGCAGGTCACCAAAGAGAA	Lpin2
Lpin2_4	AACCTGGATCCGTGTCCTG	Lpin2
Magt1_1	TGTGTGTGCGATCGCAGCGG	Magt1
Magt1_2	CAGCTGAGCAGATTGCCCGG	Magt1
Magt1_3	TTATGCTGGACCCCTAATGT	Magt1
Magt1_4	GTGGAGCTTTAACAAGACGA	Magt1
Unc13d_1	AATCTGGTACAGGACGTCAT	Unc13d
Unc13d_2	ACAGAGACCTACCCAGACCG	Unc13d
Unc13d_3	TGGCTGGCTGAAACCAGCGG	Unc13d

identifier	sgRNA.Target.Sequence	Target.Gene.Symbol
Unc13d_4	GCAGCCCTGTGTCCCGACGT	Unc13d
Slc29a3_1	AATGATGGCCATGCACGCGA	Slc29a3
Slc29a3_2	GGGAAACTGCGCAGAACCCG	Slc29a3
Slc29a3_3	CAAGGAAGACTGCTGCCATG	Slc29a3
Slc29a3_4	ACCAGAAAACACTCGAACTG	Slc29a3
Lrba_1	GACCGTCCCAATGAACTCAG	Lrba
Lrba_2	GTGTGGCGAGTGGACGAAGA	Lrba
Lrba_3	ATAGTTACCATGTACCACTG	Lrba
Lrba_4	CAGATGCAGTAGACCAACAA	Lrba
Rltpr_1	GCCTGACTTACCATGAAGGG	Rltpr
Rltpr_2	CAACCAAGTAGACTCTACTT	Rltpr
Rltpr_3	AGACCACCCTGGATAACCACA	Rltpr
Rltpr_4	ACATGCGCCTGTCAATCACT	Rltpr
Ap1s3_1	CCCACTCCCTGACAAGGAG	Ap1s3
Ap1s3_2	TCCAGACCGTCCTCTCTCGT	Ap1s3
Ap1s3_3	TCAGTCGACAAGGGAAGCTG	Ap1s3
Ap1s3_4	TAATATCCAGCTCACAGACC	Ap1s3
Ctps_1	ATTGGCCATTAACCACAAGC	Ctps
Ctps_2	ATACCAGTACGTCATTAACA	Ctps
Ctps_3	GCCCACAAGAGCGATCGAGC	Ctps
Ctps_4	TTAATACCCGTAGACGAAGA	Ctps
Tpp2_1	CACACCAAGCAGTCATATAC	Tpp2
Tpp2_2	ATTGATATCATTGATACAAC	Tpp2
Tpp2_3	ATAGGCCAATAAACTAATCA	Tpp2
Tpp2_4	TGGTTATGACTTCTATCCAA	Tpp2
BRDN0000737505	AAAAAGTCCGCGATTACGTC	NTC
BRDN0000737693	AAAACGGCTCGATCGGTGAT	NTC
BRDN0000737637	AAAACGTAATTATACCGAGC	NTC
BRDN0000738185	AAAATTGCACCTTCCCGGCC	NTC
BRDN0000737801	AAACCCCGCGCGGAGCGTC	NTC
BRDN0000737467	AAACCTAGCGTAGATTCGGC	NTC
BRDN0000737848	AAACGAGGCTGTTCGTACAC	NTC
BRDN0000737609	AAACTCATACGTAGCGAATC	NTC
BRDN0000737434	AAACTCCCGTGTCAACCGAT	NTC
BRDN0000738254	AAAGACGTGCATTAGCGAG	NTC