

Supplemental Table 1. Primer and their sequences used in Chingme et al., Genes & Immunity 6, 186-193, 2005

Group	Left (L) primer	Primer Sequence (from 5' to 3')	Nested (N) primer	Primer Sequence (from 5' to 3')	Right (R) primer	Primer Sequence (from 5' to 3')
Group 1	UT (Universal Tail)	GATGCTAGTCTTCGTGATGG				
	IGHV6-1L	TGCTGAATTCGTGGTGACCA	IGHV6-1N	ACTGTTGTCTAGAGACACTGT	IGHV6-1R	UT - TGCTGTCTGTAATACGGC
	IGHV(II)-1-1L	UT - TGGACCAGCAGCCCTCTGG	IGHV(II)-1-1N	GGAGAGTTGGCCAGAAAGG	IGHV(II)-1-1R	CTGCCCTGGCCATCACGG
	IGHV1-2L	UT - AATCCCTGTAGAGCTCCGTT	IGHV1-2N	CACAGAAGTGGATGAGATCTCCC	IGHV1-2R	TGCACCTGGGAGTGGGCTC
	IGHV(III)-2-1L	UT - TGCTGTGTTCACGGAAGTCCTG	IGHV(III)-2-1N	CTGTTGGCCACCCACCACTA	IGHV(III)-2-1R	AATTCATAGTGATCAGCTCA
	IGHV1-3L	TCCTCAGAAGCCCCAGAGCA	IGHV1-3N	CAGAGCAACCTCTCACTCA	IGHV1-3R	UT - AGAGAAGTACAGAGTGGATG
	IGHV4-4L	CCACTCCCTAGAACAGAGA	IGHV4-4N	AGATTCCCTCTAAACATGAT	IGHV4-4R	UT - AACGTAAATCATGATGAGTT
	IGHV2-5L	UT - AGATGAGGGGAATGCAAACT	IGHV2-5N	ACAGACTCACAATGAAGGGAT	IGHV2-5R	ACAACAAGAAAGAACTGATTT
	IGHV(III)-5-1L	TATTTATTGTCTTTGATTTATCA	IGHV(III)-5-1N	CTCAAGACACAATGTCAAGAAAG	IGHV(III)-5-1R	UT - GCCCAAGTGTCTCTGGAGGT
	IGHV(III)-5-2L	UT - TATCATTGAACACCATGAAA	IGHV(III)-5-2N	CAGGCTATTTTGCACAAAGC	IGHV(III)-5-2R	AAATGCTGCAGTCAAGTGAAG
	IGHV3-6L	UT - CATGCTGATGAAAACAGCTAAA	IGHV3-6N	AACCTCATGGTGAATCCTGTA	IGHV3-6R	GTTCCTGCTCACTATGCTCAT
	IGHV3-7L	TCACCTTTTAGTACTATTGGAT	IGHV3-7N	TATTGGATGAGAGTGGGTCC	IGHV3-7R	UT - CACATAGTATTCTCACTTCCAT
	IGHV1-8L	UT - TAGAGAAAACCTGTGAGCA	IGHV1-8N	GATCCGTCTCAGCTTTGA	IGHV1-8R	GGAGAGAACACAGGAGAGAT
	IGHV3-9L	GAGTTGGGACTGAGCTGGA	IGHV3-9N	GGATTTCTCTTTGGCTATT	IGHV3-9R	UT - CAGGAGAGTCTCAGGGACCTG
	IGHV2-10L	UT - GAGCATGGGGACCTAGTTCAGT	IGHV2-10N	AAGAAAAGAACAGGTGTTTCA	IGHV2-10R	GGATAAGACCCTGGGAGAAAG
	IGHV3-11L	UT - CCCAGGAGTTTCCATTGGTG	IGHV3-11N	TCAGCTTATCTCACTCAGC	IGHV3-11R	TAGTCAGAACTGCCACATATAT
	IGHV(III)-11-1L	UT - TCGTATTAGTGCCCTTTGTG	IGHV(III)-11-1N	GCTGGGCTGTACAATCTTTCT	IGHV(III)-11-1R	TTTGCCAGGAGTGGCTGAGT
	IGHV1-12L	UT - AATCCACTGAGGTAAATATGTT	IGHV1-12N	ACTTACTGGACCTGGGAAAC	IGHV1-12R	ACTCAATCCCTCCTACTTACT
	IGHV3-13L	GCTACAGAAAAGGCTGGAG	IGHV3-13N	TCTCAGCTATTGGTACTGCTG	IGHV3-13R	UT - CAGGACTTCTGCAGGGAGGT
	IGHV(III)-13-1L	UT - CATCATCTCAATGTTTCAG	IGHV(III)-13-1N	GCAGAAAAGGCAGAAATCTCT	IGHV(III)-13-1R	GAAGAGTGAATCCAGAGGCTTTG
	IGHV1-14L	UT - ATGTTTGTCTGTCTCCTCCC	IGHV1-14N	GGCAACAGGAGAGTCAACG	IGHV1-14R	GTATCCAGAGCTTTGCGAG
IGHV3-15L	UT - TTCAGTAACCCCTGGATGAG	IGHV3-15N	GGTGCAGCGTAGTCTGTTG	IGHV3-15R	AATCTGCTTCTCAGCGGGTG	
IGHV(II)-15-1L	UT - AAATGTCAATCAGATCCGCT	IGHV(II)-15-1N	TTCCCTGGGGCTGGCAG	IGHV(II)-15-1R	ACACACTGACCCACTGCTG	
IGHV3-16L	UT - TTGTGATGAAAAGCAGCGAGCC	IGHV3-16N	GCTGTTGACCCAAATAGAAAC	IGHV3-16R	GGTAATTTGTTTATGCTGT	
IGHV(III)-16-1L	UT - TCCACATGGGGCCCTTCTT	IGHV(III)-16-1N	TGAATCAGAGGCTTTGTCAT	IGHV(III)-16-1R	AACTCTGAGAACTCCCACT	
IGHV1-17L	UT - ATGCAAAATACCTGAGATCCACT	IGHV1-17N	TCTCAGGGCTCTTATAGAGG	IGHV1-17R	GGAGGAGATGATAAAAGCCC	
IGHV1-18L	UT - GTTACACCTTTACCAGCTATG	IGHV1-18N	GCTTCTGTGATGTTTGTGTT	IGHV1-18R	TCGTGGATGTGTGTGTTG	
IGHV3-19L	GAGAATTTTGAAGTATGAGCTGT	IGHV3-19N	CTGTCTTTTGGCAGCCCT	IGHV3-19R	UT - TCCACAGCTGCACCTTTG	
IGHV3-20L	UT - GGAATCTCAGGGCTGGGGG	IGHV3-20N	CAGGTGGGCTCCTCCCTG	IGHV3-20R	UT - GGAATCTCAGGGCTGGGGG	
IGHV(II)-20-1L	GCATATCAATGACAATAAC	IGHV(II)-20-1N	CAGGTGAATGCTGGATTCCT	IGHV(II)-20-1R	UT - CCCCAGGACATAGATCTG	
IGHV3-21L	AGCATGAGCACCAGGAT	IGHV3-21N	CATGGAACCTGGGGCTCCG	IGHV3-21R	UT - GAGAGACTGTTGCGAAAGCTG	
IGHV(II)-22-1R	UT - GTAATGGAGAAGCAGAGATGC	IGHV(II)-22-1N	CATGCCGACAACTGTGATT	IGHV(II)-22-1R	TTTCATCAAAATGTGCAAT	
IGHV(III)-22-2L	CCCAGTCCAGATTACCAGGAG	IGHV(III)-22-2N	TGATTTGACAATCAGCTCTG	IGHV(III)-22-2R	UT - CCACATGCTTAATATCT	
IGHV3-23L	UT - TATGCAAAATAGAGCCCTCCG	IGHV3-23N	CCACAAGAAAAGCCAGCTCA	IGHV3-23R	ATTCACTCAATTTTTCTAT	
IGHV1-24L	UT - TTTCTTGGCCAGAGACCAT	IGHV1-24N	CTGGAACCTCAGGATCTCTC	IGHV1-24R	CCACTAACTGGACCCAGCT	
IGHV3-25L	UT - ATATTGAGTATGAATGGATATG	IGHV3-25N	GCTGCATCTCACACTGGATA	IGHV3-25R	GGGGACACCGAGGCTTTG	
IGHV(III)-25-1L	UT - TGGCGATCAGGCTCAGCTGT	IGHV(III)-25-1N	CCCCGGCTGCACCTGATT	IGHV(III)-25-1R	AGGAGACTCAGATGACCC	
IGHV2-26L	GCACGGGGCTCGCTCAG	IGHV2-26N	ACACTCCTGCTGCTGACCCAC	IGHV2-26R	UT - CAACATGATTTCACTTCTG	
IGHV3-26-1L	CTGTGGCTGTCTCAGTCTGTT	IGHV(III)-26-1N	TTCTCTGTATTACAGAGAA	IGHV(III)-26-1R	UT - TGATCTCTCAGTGTGCTACC	
IGHV(II)-26-2L	CTGTGTCAGCCACCATGAGG	IGHV(II)-26-2N	CTCAGACACTGCCCTGCGCT	IGHV(II)-26-2R	UT - CCAGCTGTGTCGCCAGG	
IGHV7-27L	CATTTGCGCTTGAAGCATCAT	IGHV7-27N	ACTCTCCTCAGAAAGAGCC	IGHV7-27R	UT - CAGCCCGTGTGAGGAGGT	
IGHV4-28L	CACCTGCTCCCTCAGCTCGCT	IGHV4-28N	GTACTCCATCAGCAGTAGTA	IGHV4-28R	UT - GTGCTCCCAATAATAGATGTA	
IGHV4-28-1R	TGGACAAGTGAAGCTTTTAT	IGHV4-28-1N	TATTCTATAAAATGTGTGTT	IGHV4-28-1R	UT - ACTGCAGTGGAGAGGGTGC	
IGHV3-29L	UT - GTCTGACGCTGCTTTGGGC	IGHV3-29N	ATTCACACCCATAGTGAAGTCT	IGHV3-29R	AATTCAGCTTAATTCACACCC	
IGHV4-30-1L	CCATGATATTTAGAGCAAAA	IGHV4-30-1N	AGAGCAAAAGACACAGTGGAA	IGHV4-30-1R	UT - GTCTGAGGGAGCCGGTGT	
IGHV3-30-2L	UT - GCAATACTTTGAAGAGCAA	IGHV3-30-2N	TGGCCCTTTTAGCCAGCCT	IGHV3-30-2R	CTAGAGCTGCCCTTTTTCAG	
IGHV3-32L	UT - GTCTGACGCTGCTTTGGGC	IGHV3-32N	ATTCACACCCATAGTGAAGTCT	IGHV3-32R	AATTCAGCTTAATTCACACCC	
IGHV4-33-1L	CCATGATATTTAGAGCAAAA	IGHV4-33-1N	AGAGCAAAAGACACAGTGGAA	IGHV4-33-1R	UT - GTCTGAGGGAGCCGGTGT	
IGHV3-33-2L	UT - GCCCAATCTGTAAGAGCAA	IGHV3-33-2N	TGGCCCTTTTAGCCAGCCT	IGHV3-33-2R	CTAGAGCTGCCCTTTTTCAG	
IGHV4-31L	TGCCCTAAAGTCCGCATCAG	IGHV4-31N	CGCATCAGTCCCGACTCGCT	IGHV4-31R	UT - ATCTTACAATGCAAAACGGT	
IGHV4-31-1L	AAAAAATGCATGATTTGGGAAT	IGHV4-31-1N	TCCCGTGTGTCAGAGAAAT	IGHV4-31-1R	UT - GGGTCTGTGAGGATGTTCAAG	
IGHV4-34L	UT - GCAGCTACAGCAGTGGGGCG	IGHV4-34N	CTCCAGTAGTAGCAGCAAGG	IGHV4-34R	ACGGGTGTAGTTGGTCTT	
IGHV7-34-1L	GGTATGATAGACCCTGGAC	IGHV7-34-1N	GGGCTTGAAGTGATGTTG	IGHV7-34-1R	UT - ACTTGCACAGTAATACTCG	
IGHV3-35L	UT - GGCTTGTGTTTCACTCTCA	IGHV3-35N	CAAAGTGAACACCTGAGAG	IGHV3-35R	GTGTTGTGCTGATGACAAAT	
IGHV3-36L	AAACCCAGCTGCTCCGCTC	IGHV3-36N	AAGTCAACAGGTTTCCATTTGG	IGHV3-36R	UT - CAGACACAAAGTCAGAACTCG	
IGHV3-37L	UT - GTACAGCTGTGGTGGGGTTG	IGHV3-37N	GCTTCTCAGATGAATCCCG	IGHV3-37R	TGCATGATAGGCTACACCAC	
IGHV3-38L	UT - TACCATGACATGAAAATCCTCTT	IGHV3-38N	ACTGCATGATGAGTTGTG	IGHV3-38R	CAAACCCACTGTTTTGCTCAC	
IGHV3-38-1L	UT - GGCCCTGGATCAGGCTCAG	IGHV3-38-1N	CCTGCTTGCAGAACACTCTG	IGHV3-38-1R	CAAACCTGTTCTTTTTCAGTGAAT	
IGHV4-39L	UT - CATCCCTTTTCACTGCTCCGTA	IGHV4-39N	CATTTCTTGACATGAGAT	IGHV4-39R	AGCCCTCCATATCCATGCTC	
IGHV7-40L	CTTTTATATCAGAGAATG	IGHV7-40N	TTCCCTGCATCTATGTTTGA	IGHV7-40R	UT - TCATCACTATGCTGCTGATG	
IGHV4-40-1L	UT - AATGTGTGATGAGTGGGTTTC	IGHV4-40-1N	GGTGAGTGAAGGGGGTTG	IGHV4-40-1R	GAAGCACTGATTTGACAGAGAT	
IGHV3-41L	UT - GATTCCTTATAGTACTATGGCAT	IGHV3-41N	ATAGATTTTCTGACTTCCATCATT	IGHV3-41R	GTCTTATGCTTCCAGACTGCTCA	
IGHV3-42L	GGCCGTATTAAGACCAACCG	IGHV3-42N	TTACACGACAGAAAGTGGCTG	IGHV3-42R	UT - TTGTGATGGGCTACTGTTA	
IGHV3-43L	TCACCTTTGATGATTATACC	IGHV3-43N	ATACCATGCACTGGGTCCTG	IGHV3-43R	UT - AGTATGTGCTACCACCATCCCA	
IGHV4-43-1L	TGAGCCACCATTTTTGTTAGT	IGHV4-43-1N	TTTAGTACTCAACAACAATAACAT	IGHV4-43-1R	UT - CCACTCCATCCTTCCCTGG	
IGHV3-44L	UT - GCTGACCAGGATTTCTCTGTG	IGHV3-44N	CAAGAGGAATTTGATGGTG	IGHV3-44R	AGGAAGATGATGATGAGCTT	
IGHV4-44-1L	UT - CCTTCTCTGCTGCTGGCTG	IGHV4-44-1N	AGTCACAGACACATTTGCCTCA	IGHV4-44-1R	AGGCTGAGCATGACCAAGGG	
IGHV4-44-2L	CCTCACAATGCCCATTTCTG	IGHV4-44-2N	GAATCCACTAGCCGCTTCCA	IGHV4-44-2R	UT - TGGATGAATCTGTGAGAGAG	
IGHV1-45L	CCATTACCAGGGACAGGCTC	IGHV1-45N	CAGGTCTTAGGACACAGCTC	IGHV1-45R	UT - AACCTCCTATTCAAGTGAAG	
IGHV1-46L	CATCTGGGCCCTGAAAGCAT	IGHV1-46N	GAAGCCTCTGAGAGGAAAGTTC	IGHV1-46R	UT - GGACACAGTAGAAGTACAGCTCT	
IGHV4-46-1L	UT - GAAGGTGAACCTCTCAGATGTC	IGHV4-46-1N	ACATGGAGAATCAGTCCCTG	IGHV4-46-1R	CAGGTCCAGGGCTGACTCTT	
IGHV3-47L	TTGGGATTCCTCAAGTGTGTCATT	IGHV3-47N	ACACGGGAGTTGTGCTAAG	IGHV3-47R	UT - AGACACAAAGTCAGAAATGGCC	
IGHV3-47-1L	CCGTTAAACAGACTGAGTGAACCTG	IGHV3-47-1N	CAGGGGACCTCTGCAAGCACAG	IGHV3-47-1R	UT - AAAGTGAATCCACAGGGTTTC	
IGHV3-48L	UT - TATTGTCTCTACAGAACATAG	IGHV3-48N	TAGAAGTTTGTGCGCAATGATT	IGHV3-48R	ATAAGACGACGGTCCCTCTG	
IGHV3-49L	TGATTTCCAAAGCATCACCTA	IGHV3-49N	CAGGAAAAGGAAACCTCC	IGHV3-49R	GGTCACTTTCCAGCCAAGG	
IGHV4-49-1L	GTGCTGTCTGTCTCTCCAT	IGHV4-49-1N	CCCTCAGCTCCCAAGGAAAG	IGHV4-49-1R	UT - ATCTTTTGTGAAAAATCATGGTT	
IGHV3-50L	UT - TGAGATATGAGAGTGTGAGTGGAT	IGHV3-50N	CCCCACTAGACACCTCAACG	IGHV3-50R	TCAGCTTGTGCCAATCTCC	
IGHV5-51L	TGACAACATGCAAAATGCAAGT	IGHV5-51N	CAGTGAGTCTCCCTCACTCG	IGHV5-51R	UT - CTTTCTCTCTGTGACCTCAAG	
IGHV3-51-1L	UT - TTTCCAGCATCTTTGGGAGG	IGHV3-51-1N	CGCTCACCCTGATACCTG	IGHV3-51-1R	CCCTCTCAGTGTCAACAGTCT	
IGHV4-51-2L	CCAGTCTCAGTCAAGGGAGT	IGHV4-51-2N	ATCAGGGACTAGTGCACGAG	IGHV4-51-2R	UT - TGGATACACTGACATCTCTT	
IGHV3-52L	CTCCAGGATTTCCAGGCTTTT	IGHV3-52N	TTCCAGGCTTTTCCATTTA	IGHV3-52R	UT - TTACATTCAACTCATTCCCAT	
IGHV3-53L	GAATGATGAAATTAATACCAAT	IGHV3-53N	AATACCAATCTCCCCAGGAC	IGHV3-53R	UT - GGAATCCAGTGTCTGGGCTC	
IGHV4-53-1L	GCTGCTATCTAAAACCCCCC	IGHV4-53-1N	AGGAAGGACTGTGAGTGAATCC	IGHV4-53-1R	UT - TTTCTTGTGCTGCTTTGTTA	
IGHV3-54L	TGTGAATGGATACACTTGGAGA	IGHV3-54N	GATATGCTGGAACCTTTCTG	IGHV3-54R	UT - CAAGTTGCTTTGGTTTTCTT	
IGHV4-55L	GATGCTGCTCTCATCCAG	IGHV4-55N	CATCCAGGAGTCAAGCTGTTG	IGHV4-55R	UT - GCTCCCACTATGATGAGGAG	
IGHV7-56L	CTGGTAAATGTCTACACCTATG	IGHV7-56N	GGTGAACCAATGATATGCCAAC	IGHV7-56R	UT - TGGCTGACTCTCAGTCTTT	
IGHV3-57L	UT - TCCACATGGGCGCTTCTT	IGHV3-57N	TGAAATCAGAGGCTTTGAT	IGHV3-57R	AACTCTGAGAACTCCCACTT	
IGHV1-58L	UT - AGTGGGTGCGCAGGCTCGT	IGHV1-58N	AGTTTGTGTACCACCTGCAAC	IGHV1-58R	CCTGTAATGGTGAATCTTTCT	
IGHV4-59L	TTTTGCTGCTGATTTGAAGTT	IGHV4-59N	CGTGTGATTTGAAGTTTCCA	IGHV4-59R	UT - ACAATCAAGAGATGAGAAAG	
IGHV3-60L	UT - TGAANAATCAGCAAACTCTG	IGHV3-60N	AAACTGCAACAGGAAATCC	IGHV3-60R	CAGTCACTCAGTGTGCTCATT	
IGHV4-60-1L	UT - GTCTTTGGAAATGTTAATCTCTGT	IGHV4-60-1N	CAGTGGTTGTGAGGAAATCC	IGHV4-60-1R	CCTTCCCATGTGGACTGCTG	
IGHV3-62L	UT - TAITTTTCCGAATGATACAAAT	IGHV3-62N	GCCGACTCTCAGTCTGGCC	IGHV3-62R	CACGGAATGGAAACCCGCC	
IGHV4-62-1L	UT - ATCGAACACAGGTGAGCTCTTTAT	IGHV4-62-1N	GCAGGCAAGCTTCTGACAACT	IGHV4-62-1R	AGAGGGAGCTGATGATGACG	
IGHV3-63L	AGTGAGAAAACAGTAGATGTTTGG	IGHV3-63N	ACGTTTGTGATTTTCCAGGTT	IGHV3-63R	UT - TATTTTACTCTATTACTCCCTCCA	
IGHV3-64L	TATCCAGGTTGTTTCTTTTGG	IGHV3-64N	TACGACTGAAACAGAGAGT	IGHV3-64R	UT - TCAATTTCTCATGAACTCTTTA	
IGHV3-65L	TGATTTCCAAAAGCATCACCTA	IGHV3-65N	CTGCTCTGGGACTGTCTCTGTC	IGHV3-65R	AAAGGAAAACCTCCAGCAT	

Group 2,3

IGHV4-65-1L	UT - AGATCCACATCCAAAAACAGTG	IGHV4-65-1N	GTGTCTTTGTATTAATAATTCA	IGHV4-65-1R	AGTGCCCTCGTCTTTCTG
IGHV3-66L	GAATGATGGAATTAATACCAAT	IGHV3-66N	TACTACCAATCTCCCCAGGAG	IGHV3-66R	UT - GGAATCCCAGTGTGGGCTC
IGHV1-67L	UT - GATAATTCTCAGTCCCCAG	IGHV1-67N	TGCCCCAGCCTTCTTCATCTC	IGHV1-67R	GAAGGTAGGTGATCCACAAGTCTT
IGHV4-67-1L	UT - CCAGATGTCTATTCCAGGAGCA	IGHV4-67-1N	CATTTTATCCATTCAACCCATT	IGHV4-67-1R	CTTTAAAAGAGATGCTGCCATT
IGHV3-67-2L	UT - GCTATTCTAGAGACTCTG	IGHV3-67-2N	CCCATTGACAGATATAGCATA	IGHV3-67-2R	GTGATATACTGATGTGTTCTTG
IGHV3-67-3L	AGGGGGCTCTCACAGGGGT	IGHV3-67-3N	CGAGGGACATTTCTGTGAGT	IGHV3-67-3R	UT - GAGCACCCCTCGTGTCTG
IGHV3-67-4L	UT - GGGTTGTTCTCAGTCTATTTCCCT	IGHV3-67-4N	GGGCTGTACTACGTTTACCC	IGHV3-67-4R	TGAGCACTCCCACTTGTGACT
IGHV1-68L	GCCTCTAGAGAATCCCCGAG	IGHV1-68N	GATTGAGTACAGTCAAGGAG	IGHV1-68R	UT - TTTACCTCAGCCTCAGACTGCC
IGHV1-69L	TGGAGGCACCTTCAGCAGCTAT	IGHV1-69N	GGATGGGAGGATCATCCCTATC	IGHV1-69R	UT - GTGATTGTCCCGGTAATC
IGHV2-70L	CCTGGGTTCAAAAGACGAGG	IGHV2-70N	CGCTCAGTGAATCTGCTCT	IGHV2-70R	UT - TTTTTGCTTCTGAAGTACTACCTG
IGHV3-71L	AGGGACACTGTGCACGGGGC	IGHV3-71N	CCTGTGATGGCTCGGGGCTG	IGHV3-71R	UT - CTGTTACAAAAACAAAATACA
IGHV3-72L	CCACTACATGGACTGGGTCCG	IGHV3-72N	CTAGAAACAAAGCTAACAGTTAC	IGHV3-72R	UT - GCAGATACAGTGAGTCTTTGAA
IGHV3-73L	GCCAGGCTTCCGGGAAAGG	IGHV3-73N	TTAGAAGCAAAGCTAACAGTTAC	IGHV3-73R	UT - TACGCCGTGTTCTTTGAATCA
IGHV3-74L	UT - TGGGTCTCACGTATTAATAGTGATG	IGHV3-74N	TCACGGAGTCCCGTAGCTT	IGHV3-74R	TCGTGGTCTCAGATGCCCT
IGHV4-74-1L	UT - AAGCCCTGCTCTATGGGTGA	IGHV4-74-1N	CAGTGTGGCTCTTCTAGTCTG	IGHV4-74-1R	AGCCCTTCTCGGGGTGGC
IGHV3-75L	TTTGGTGAAAACAGCCCTG	IGHV3-75N	CACCCTACAGTCTGGGATGGGA	IGHV3-75R	UT - CTCTAGTTCACCCTGAATCTACTTTT
IGHV3-76L	UT - GCAGTACCAAGGTGCTTCCATT	IGHV3-76N	ATTTCTAGTCTCTTGTGATTGCC	IGHV3-76R	TCTCACTCATCACTCACAGACAAT
IGHV3-76-1L	UT - TGCTAATCTGGGTTCTCTTCTTAT	IGHV3-76-1N	TCTCCAGATCCACCAGTGA	IGHV3-76-1R	ATTCAGAGGCTTTGTAAAAAAGG
IGHV5-78L	CGGCAACTATGCAAAATTCAAG	IGHV5-78N	ACAGTGAGTCTCCTTACC	IGHV5-78R	UT - TCCCTCTGCCATTCTTCTCT
IGHV4-78-1L	UT - CGCTGTGCTGTGTTCCCC	IGHV4-78-1N	TTCCCTGGGGGCTGATGG	IGHV4-78-1R	GCTTTTTGGACACGGATCTG
IGHV3-79L	TTGCTCTAGGAGATTACAAAATTGA	IGHV3-79N	GTTTATTCTCATAAAAATGTA	IGHV3-79R	UT - ATCCAGCTTCAGCAGGAAGACC
IGHV4-80L	UT - CACAGGAAACCCACACACAT	IGHV4-80N	CATGTTCTTTTACACAGGTT	IGHV4-80R	GCAGCCTCCCATATCTTCATATC
IGHV7-81L	UT - ATAAGTGGGGAATATAGTAT	IGHV7-81N	CTGGTTTCTGCCCAACCC	IGHV7-81R	TAAAGCCTCACTTGAGTGGC
IGHV3-82L	CTCAGTATTAGTGTGATTGTGAAT	IGHV3-82N	GCATGGGGCTGCAGTCAGTA	IGHV3-82R	UT - AACCGCTGGGCTGTACAATGTT