

Additional File 3 Derived protein sequences of cytokine receptor transcript variants

A. IL-23R derived protein sequences

IL23R	MNQVTIHWDVVIALYIFFSWCHGGITNINCSGHIWVEPATIFRMGMNISIYCQAAIRNCQ	60
IL23Rv1	MNQVTIHWDVVIALYIFFSWCHGGITNINCSGHIWVEPATIFKMGMNISIYCQAAIRNCQ	60
IL23Rv2	MNQVTIHWDVVIALYIFFSWCHGGITNINCSGHIWVEPATIFKMGMNISIYCQAAIRNCQ	60
IL23Rv3	MNQVTIHWDVVIALYIFFSWCHGGITNINCSGHIWVEPATIFKMGMNISIYCQAAIRNCQ	60
IL23Rv4	MNQVTIHWDVVIALYIFFSWCHGGITNINCSGHIWVEPATIFKMGMNISIYCQAAIRNCQ	60
IL23Rv5	MNQVTIHWDVVIALYIFFSWCHGGITNINCSGHIWVEPATIFKMGMNISIYCQAAIRNCQ	60

IL23R	PRKLYFYKNGIKERFHITRINKTTARLWYNNFVEPQAFVYCTAECSTRYFPETLICGKDIS	120
IL23Rv1	PRKLYFYKNGIKERFHITRINKTTARLWYNNFVEPQAFVYCTAECSTRYFSETLICGKDIS	120
IL23Rv2	PRKLYFYKNGIKERFHITRINKTTARLWYNNFVEPQAFVYCTAECSTRYFPETLICGKDIS	120
IL23Rv3	PRKLYFYKNGIKERFHITRINKTTARLWYNNFVEPQAFVYCTAECSTRYFPETLICGKDIS	120
IL23Rv4	PRKLYFYKNGIKERFHITRINKTTARLWYNNFVEPQAFVYCTAECSTRYFPETLICGKDIS	120
IL23Rv5	PRKLYFYKNGIKERFHITRINKTTARLWYNNFVEPQAFVYCTAECSTRYFPETLICGKDIS	120

IL23R	SGYPPDVPDKVTCVIYEYSGNMTCTWNPGRPTYIDTKYVVYVKSLETEEEQEYLTSSYIN	180
IL23Rv1	SGYPPDVPDKVTCVIYEYSGNMTCTWNPGRPTYIDTKYVVYVKSLETEEEQEYLTSSYIN	180
IL23Rv2	SGYPPDVPDKVTCVIYEYSGNMTCTWNPGRPTYIDTN-----LETEEEQEYLTSSYIN	173
IL23Rv3	SGYPPDVPDKVTCVIYEYSGNMTCTWNPGRPTYIDTKYVVYVKSLETEEEQEYLTSSYIN	180
IL23Rv4	SGYPPDVPDKVTCVIYEYSGNMTCTWNPGRPTYIDTKYVVYVKSLETEEEQEYLTSSYIN	180
IL23Rv5	SGYPPDVPDKVTCVIYEYSGNMTCTWNPGRPTYIDTKYVVYVKSLETEEEQEYLTSSYIN	180

IL23R	ISTDSLQKGGKYLWVWQASNLVGLTEKSKQLQIHLDDIVIPSASIIISRAEDINTTVSKTVI	240
IL23Rv1	ISTDSLQKGGKYLWVWQASNLVGLTEKSKQLQIHLDDIVIPSASIIISRAEDINTTVSKTVI	240
IL23Rv2	ISTDSLQKGGKYLWVWQASNLVGLTEKSKQLQIHLDDIVIPSASIIISRAEDINTTVSKTVI	233
IL23Rv3	ISTDSLQKGGKYLWVWQASNLVGLTEKSKQLQIHLDDIVIPSASIIISRAEDINTTVSKTVI	240
IL23Rv4	ISTDSLQKGGKYLWVWQASNLVGLTEKSKQLQIHLDDIVIPSASIIISRAEDINTTVSKTVI	240
IL23Rv5	ISTDSLQKGGKYLWVWQASNLVGLTEKSKQLQIHLDDIVIPSASIIISRAEDINTTVSKTVI	240

IL23R	HWNSQTSIEKVSCEMRYKATTNQTWNVKEFDTNFTYEQQSEFYLPNATYVFQVRCQETG	300
IL23Rv1	HWNSQTSIEKVSCEMRYKATTNQTWNVKEFDTNFTYEQQSEFYLPNATYVFQVRCQETG	300
IL23Rv2	HWNSQTSIEKVSCEMRYKATTNQTWNTLKNLIPILHMSNSQNSTCSQ-----MLHTY	285
IL23Rv3	HWNSQTSIEKVSCEMRYKATTNQTWNVS-----	268
IL23Rv4	HWNSQTSIEKVSCEMRYKATTNQTWNVKEFDTNFTYEQQSEFYLPNATYVFQVRCQETG	300
IL23Rv5	HWNSQTSIEKVSCEMRYKATTNQTWNVKEFDTNFTYEQQSEFYLPNATYVFQVRCQETG	300

IL23R	KRYWQPWS ¹ SPFFHKTPEIVPQVTMKS ² FQHD ³ TQNSGLLIASIFKKHLTSDNGKQDIG ⁴ LLLG	360
IL23Rv1	KRYWQPWS ¹ SPFFHKTPEIVPQVTMKS ² FQHD ³ TQNSGLLIASIFKKHLTSDNGKQDIG ⁴ LLLG	360
IL23Rv2	FK-----	287
IL23Rv3	-----	268
IL23Rv4	KRYWQPWS ¹ SPFFHKTPEI-----DNGKQDIG ⁴ LLLG	330
IL23Rv5	KRYWQPWS ¹ SPFFHKTPEIVPQVTMKS ² FQHD ³ TQNSGLLIASIFKKHLTSELKEESYC----	356
IL23R	MVFFAVMLSVLSLFGIFNKSIR ¹ FGIKRRILLIPKWLYEDIPKLENSKVVKILQEKNEFM	420
IL23Rv1	MVFFAVMLSVLSLFGIFNKSIR ¹ FGIKRRILLIPKWLYEDIPKLENSKVVKILQEKNEFM	420
IL23Rv2	-----	287
IL23Rv3	-----	268
IL23Rv4	MVFFAVMLSVLSLFGIFNKSIR ¹ FGIKRRILLIPKWLYEDIPKLENSKVVKILQEKNEFM	390
IL23Rv5	-----	354
IL23R	NNNSSEQVLYVDPVITEIEIILPEEKPIGYKKENNTGCLERKESLEKSLLTNTTVVYIPD	480
IL23Rv1	NNNSSEQVLYVDPVITEIEIILPEEKPIGYKKENNTGCLERKESLEKSLLTNTTVVYIPD	480
IL23Rv2	-----	287
IL23Rv3	-----	268
IL23Rv4	NNNSSEQVLYVDPVITEIEIILPEEKPIGYKKENNTGCLERKESLEKSLLTNTTVVYIPD	450
IL23Rv5	-----	354

IL23R	LNTGYKPKQISSFLPGGNHLRNDDETASSILEPPADSLNLGNNARFKKYPDFAFVSSTNS	540
IL23Rv1	LNTGYKPKQISSFLPGGNHLRNDDETASSILEPPADSLNLGNNARFKKYPDFAFVSSTNS	540
IL23Rv2	-----	287
IL23Rv3	-----	268
IL23Rv4	LNTGYKPKQISSFLPGGNHLRNDDETASSILEPPADSLNLGNNARFKKYPDFAFVSSTNS	510
IL23Rv5	-----	354

IL23R	LSNTLFLEELSLILNQGECSPPDMQNSIEGETAMLLEDALLNETIPEQTLLPDEFVSLG	600
IL23Rv1	LSNTLFLEELSLILNQGECSPPDMQNSIEGETAMLLEDALLNETIPEQTLLPDEFVSLG	600
IL23Rv2	-----	287
IL23Rv3	-----	268
IL23Rv4	LSNTLFLEELSLILNQGECSPPDMQNSIEGETAMLLEDALLNETIPEQTLLPDEFVSLG	570
IL23Rv5	-----	356

IL23R	SMNKELPSINSYFPQNIRESHFNRFHS	627
IL23Rv1	SMNKELPSINSYFPQNIRESHFNRFHS	627
IL23Rv2	-----	287
IL23Rv3	-----	268
IL23Rv4	SMNKELPSINSYFPQNIRESHFNRFHS	597
IL23Rv5	-----	356

Bold, class 1 cytokine receptor activation motif
 Box, R381Q variant site
 Underline, transmembrane domain

A. IL-12RB1 derived protein sequences

IL12RB1	1 MGQWGFRLVAFLLLLCHRQGAACGTVGCCFQNPYPDADSGSASGPRAL	50
IL12RB1v3	1 MGQWGFRLVAFLLLLCHRQGAACGTVGCCFQNPYPDADSGSASGPRAL	50
IL12RB1	51 SCYRLSSSAGYECSWEYEGPAAGVIHFLRCCLQSGRCCFFATGSATKLQF	100
IL12RB1v3	51 -----	50
IL12RB1	101 SDQDGISVLHNVTLWVESRAANRTEKSPNVTLNLYSSVKYDPPPGNIKVS	150
IL12RB1v3	51 -----	50
IL12RB1	151 KSAGKLMEWETPARQDGAEVQFRHRTPGSPWKLGDGCRQDDAGFESCLC	200
IL12RB1v3	51 -----	50
IL12RB1	201 PLEMDMAQEFQLRRRLGPGVPGGP WSSWS SPVICPPETPPQAEVRFSAEQ	250
IL12RB1v3	51 ----- SWSS SPVICPPETPPQAEVRFSAEQ	74
IL12RB1	251 LCPDGRRQVALHEQLPQLELPEGCLGPDPGMEVITYKIHLHMLSCKPCKTRA	300
IL12RB1v3	75 LCPDGRRQVALHEQLPQLELPEGCLGPDPGMEVITYKIHLHMLSCKPCKTRA	124
IL12RB1	301 KKTLLRKRKLVLSSAAYDLTIVSQNRFGGLGNQWTRIPACIHSEPGLLNI	350
IL12RB1v3	125 KKTLLRKRKLVLSSAAYDLTIVSQNRFGGLGNQWTRIPACIHSEPGLLNI	174
IL12RB1	351 SAGANGTTMHWPARAQGMRYCIEWQLQGQEEENLAACIVTAPQDADAAGMA	400
IL12RB1v3	175 SAGANGTTMHWPARAQGMRYCIEWQLQGQEEENLAACIVTAPQDADAAGMA	224
IL12RB1	401 THSWSQESGALAQKACYHIAIFASAHPEKLTWSTVLSTYHFGGNASAAG	450

IL12RB1v3	225	THSWSQESGALAQKACYHIAIFASAHPEKLTWSSTVLSTYHFGGNASAAG	274
IL12RB1	451	SPQHVSVRKLSQDSVSVSDWTSSLSTCPGVLKEYVVVFQEEDSNQASELH	500
IL12RB1v3	275	SPQHVSVRKLSQDSVSVSDWTSSLSTCPGVLKEYVVVFQEEDSNQASELH	324
IL12RB1	501	VKPTETQVTLQGLRAGTAYKVQVRADTAKWRGAWSQPLHFTIEVQVSELS	550
IL12RB1v3	325	VKPTETQVTLQGLRAGTAYKVQVRADTAKWRGAWSQPLHFTIEVQVSELS	374
IL12RB1	551	DLSIFLASLGSFVSILLGIFGYLSLNRAVRHLCPPPTPGASTAIKFSG	600
IL12RB1v3	375	DLSIFLASLGSFVSILLGIFGYLSLNRAVRHLCPPPTPGASTAIKFSG	424
IL12RB1	601	SQGKQVWQWTSPADFPPEEVS PHEALMVNISWEKGEADMGTGLTLKEKME	650
IL12RB1v3	425	SQGKQVWQWTSPADFPPEEVS PHEALMVNISWEKGEADMGTGLTLKEKME	474
IL12RB1	651	LPLRAPKPADTELPLKDRKQMCGCEAGALRPGWQDGLVEDSLAQVARP	700
IL12RB1v3	475	LPLRAPKPADTELPLKDRKQMCGCEAGALRPGWQDGLVEDSLAQVARP	524
IL12RB1	701	PLLLGGGLRQAPRFGSQGEAGTAASSYRED	730
IL12RB1v3	525	PLLLGGGLRQAPRFGSQGEAGTAASSYRED	554

Bold, class 1 cytokine receptor activation motif
Underline, transmembrane domain

B. IL-17RB derived protein sequences

IL17RB	MLLVLLSLAALCWGAVPPEPTIQCGSEPGPSPEWVRHTLTPGDLRDLRVEPIKSSVDLE	60
IL17RBv1	MLLVLLSLAALCWGAVPPEPTIQCGSEPGPSPEWVRHTLTPGDLRDLRVEPIKSSVDLE	60
IL17RBv2	MLLVLLSLAALCWGAVPPEPTIQCGSEPGPSPEWVRHTLTPGDLRDLRVEPIKSSVDLE	60
IL17RBv3	MLLVLLSLAALCWGAVPPEPTIQCGSEPGPSPEWVRHTLTPGDLRDLRVEPIKSSVDLE	60

IL17RB	DSSILMNISWILRADASIRLLKATKICVMGKSHFQSRSCIRCNYTQAFRTQTRHSGGKWT	120
IL17RBv1	DSSILMNISWILRADASIRLLKATKICVMGKSHFQSRSCIRCNYTQAFRTQTRHSGGKWT	120
IL17RBv2	DSSILMNISWILRADVDVFLHWF--SCRAEHSFLHWSP-----	96
IL17RBv3	DSSILMNISWILRADVDVFLHWF--SCRAEHSFLHWSP-----	96
	*****..: * * :* *:	
IL17RB	FSYIGFPVELNTVYFIGAHNIPNANMNEDGPSMAVNFTSPGCLDHVMKYKKKCI EAGSLW	180
IL17RBv1	FSYIGFPVELNTVYFIGAHNIPNANMNEDGPSMAVNFTSPGCLDHVMKYKKKCI EAGSLW	180
IL17RBv2	-----	96
IL17RBv3	-----	96
IL17RB	KPNITACKKSANTVEVNFTTSPGLDRYMALIQNTSVIGTSYVSEKELTRTSVVVHVTGES	240
IL17RBv1	KPNITACKKSANTVEVNFTTSPGLDRYMALIQNTSVIGTSYVSEKELTRTSVVVHVTGES	240
IL17RBv2	-----	96
IL17RBv3	-----	96
IL17RB	EGAVVQLTPYFHTCGNDCIRQRGTVVRCPQTGVSPQDHERSVLGGWLP LLLSALLVATWV	300
IL17RBv1	EGAVAQLTPYFHTCGNDCIRQRGTVVRCPQTGVSPQDHERSVLGGWLP LLLSALLVATWV	300
IL17RBv2	-----	96
IL17RBv3	-----	96
IL17RB	<u>LVAGIYLIWRHERIKKTSFSSTTLLPSL</u> KVLV <u>VYPSEIC</u> FHHTVCYFTEFLQNR <u>CRSEVI</u>	360
IL17RBv1	<u>LVAGIYLIWRH</u> ----- VCYFTEFLQNR <u>CRSEVI</u>	328
IL17RBv2	-----	96

IL17RBv3	-----	96
IL17RB	LEKWQKKKIAEMGPVQWLT <u>TQKQAADKVI</u> FLLSNDNTMCDGTCDKKEGGPCENSQDLFHL	420
IL17RBv1	LEKWQKKKIAEMGPVQWLT <u>TQKQAADKVI</u> FLLSNDNTMCDGTCDKKEGGPCENSQDLFHL	388
IL17RBv2	-----	96
IL17RBv3	-----	96
IL17RB	AFNLFCSDLRSQ <u>THLRKYVVVY</u> FREGDIKDSYSALSVCPTYRLTKDATDFCAELLHAKQH	480
IL17RBv1	AFNLFCSDLRSQ <u>THLRKYVVVY</u> FREGDIKDSYSALSVCPTYRLTKDATDFCAELLHAKQH	448
IL17RBv2	-----	96
IL17RBv3	-----	96
IL17RB	VSVGRRSRARHYSCLSL	497
IL17RBv1	VSVGRRSRARHYSCLSL	465
IL17RBv2	-----	96
IL17RBv3	-----	96

Bold, SEFIR domain

Box, TRAF6 binding site

Underline, transmembrane domain