

FIG. 1A

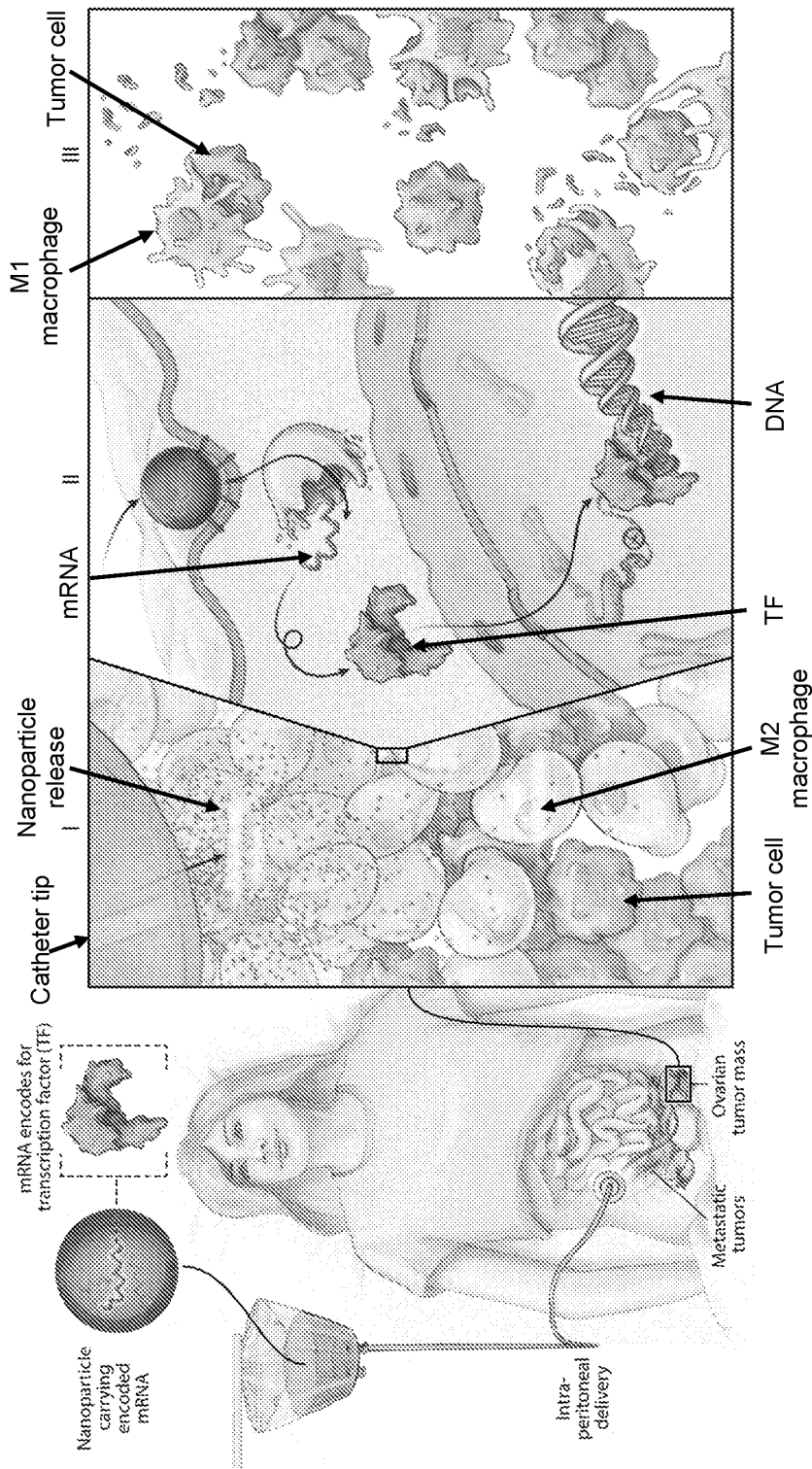


FIG. 1B

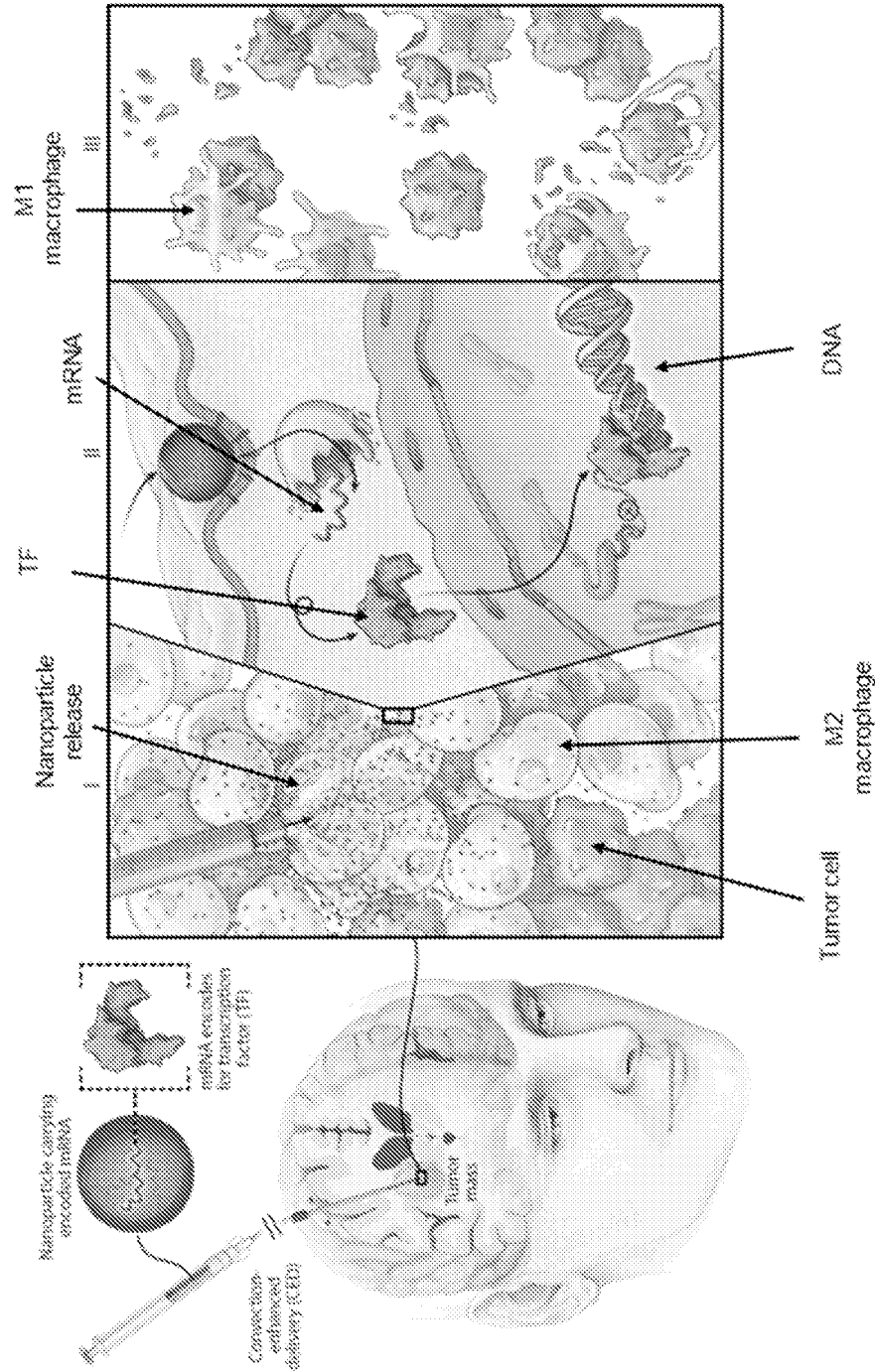


FIG. 1C

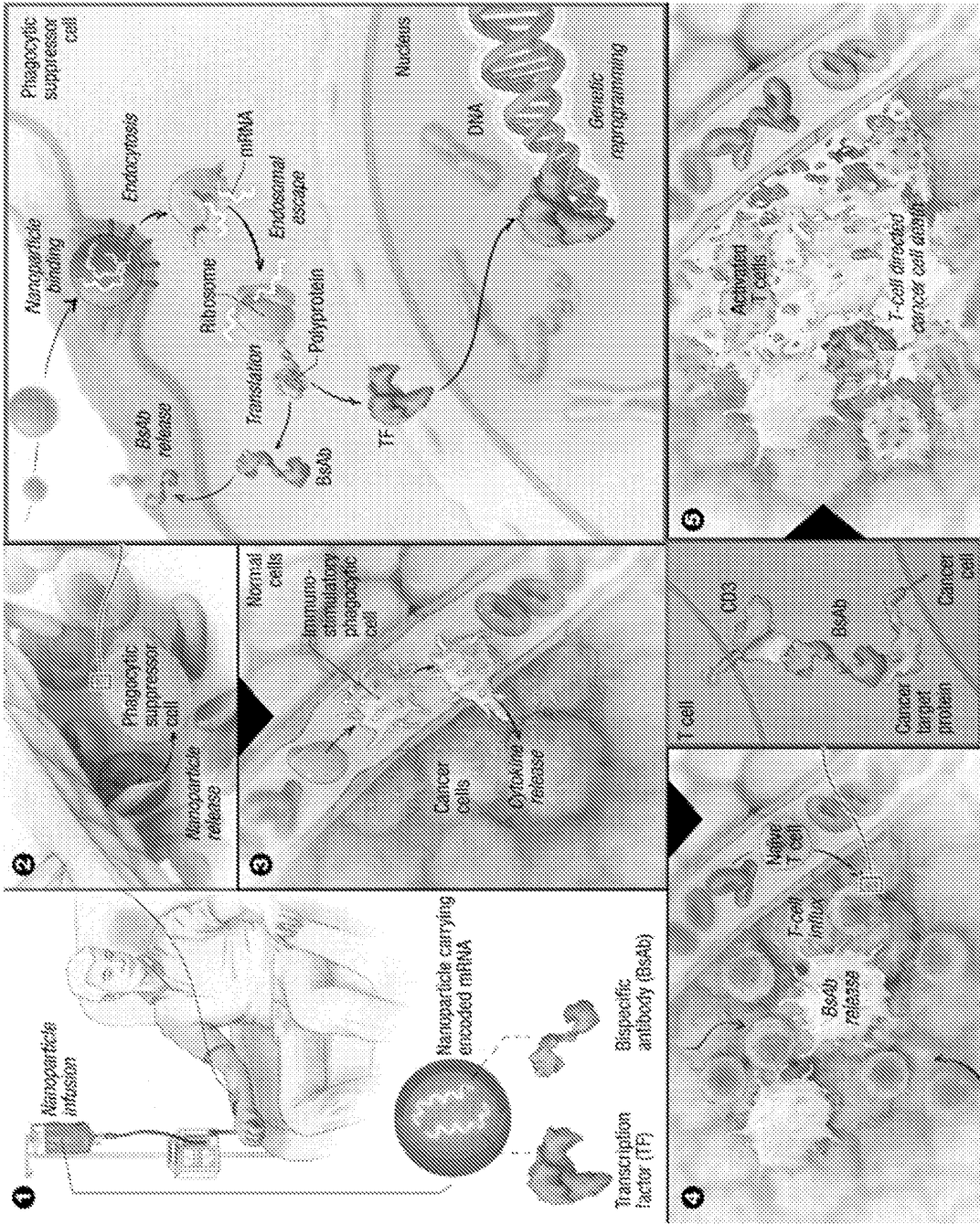
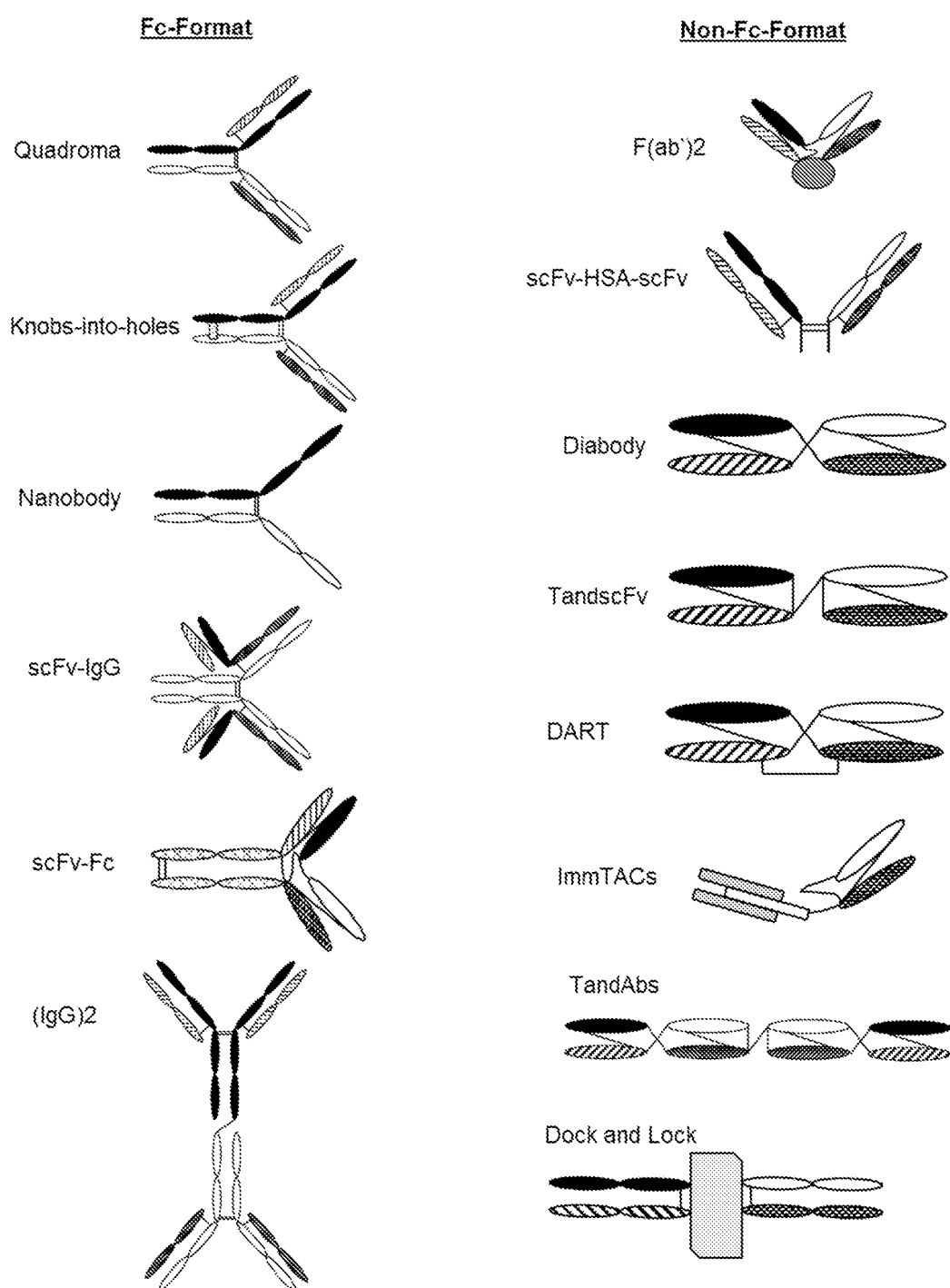


FIG. 1D



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FIG. 2A

Nanoparticle with IVT mRNA cargo

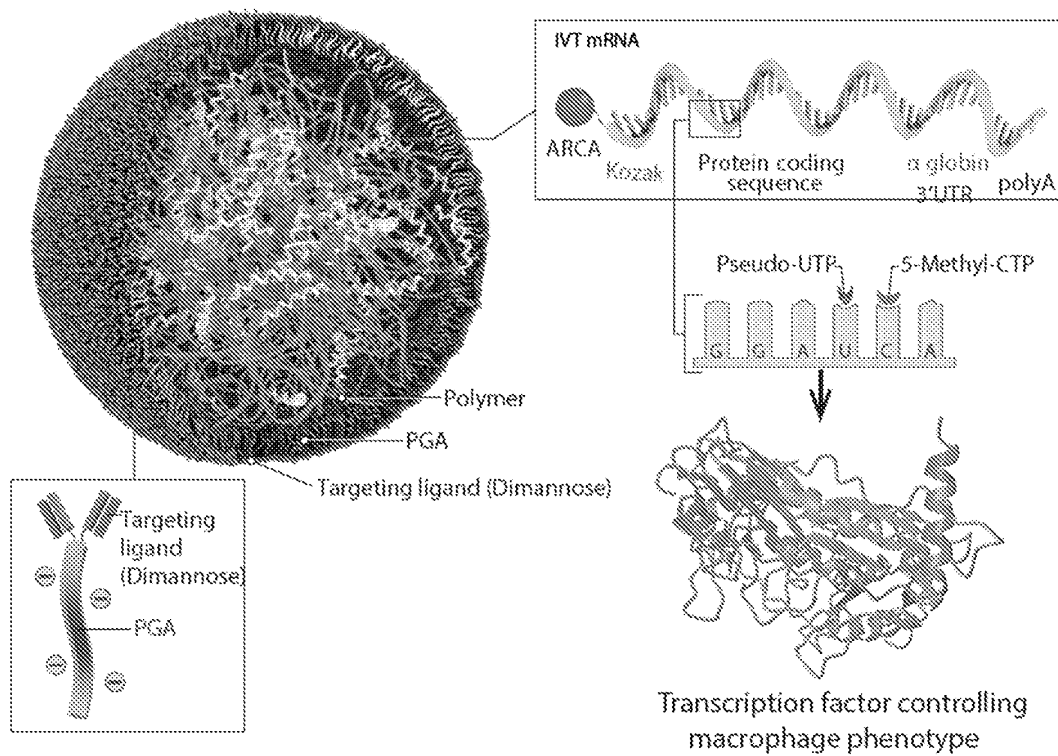


FIG. 2B

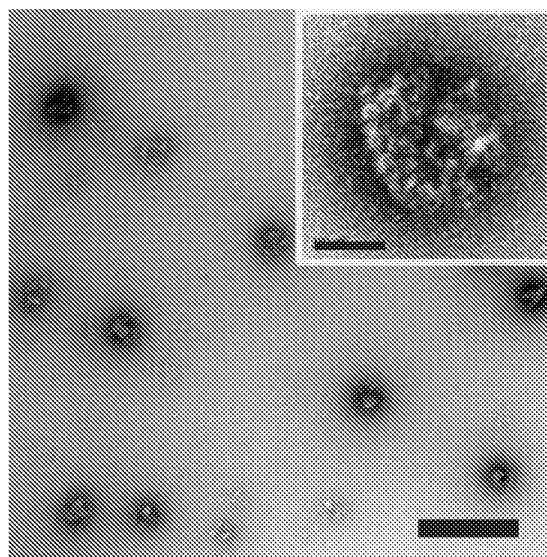


FIG. 2C

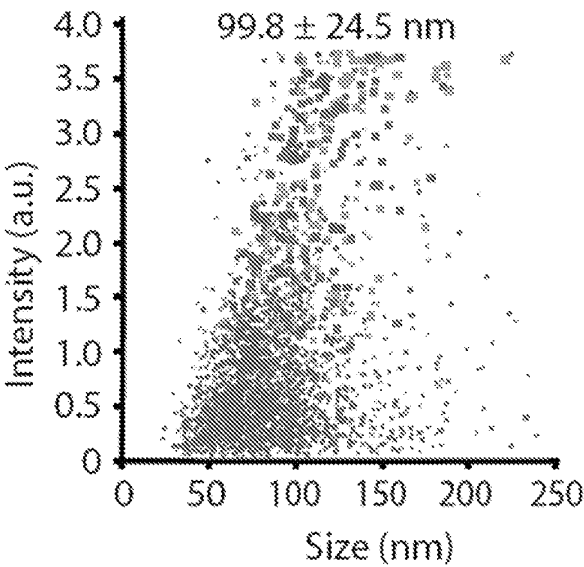


FIG. 2D

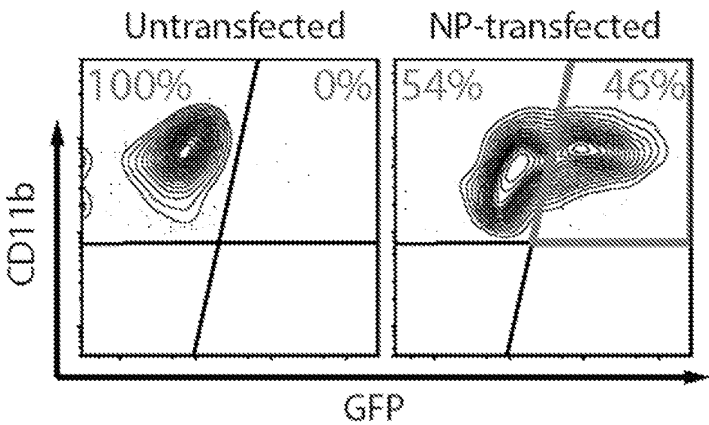


FIG. 2E

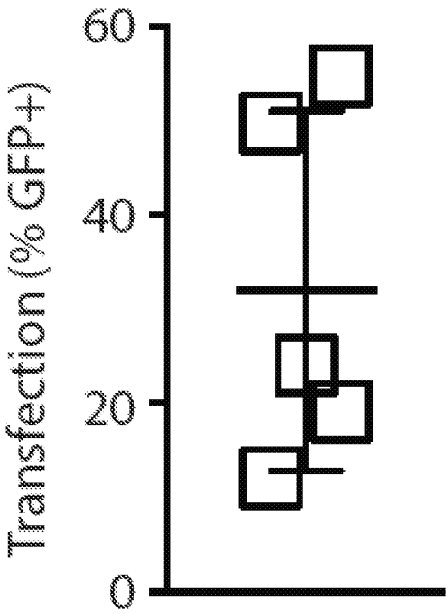


FIG. 2F

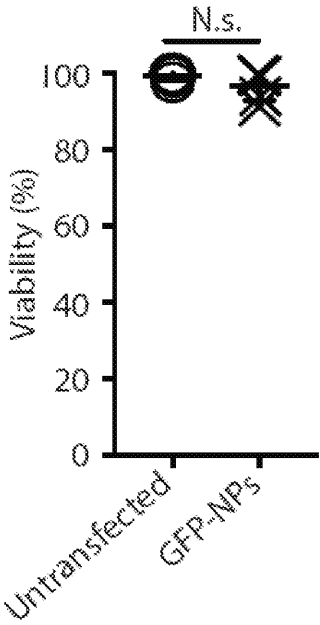


FIG. 2G

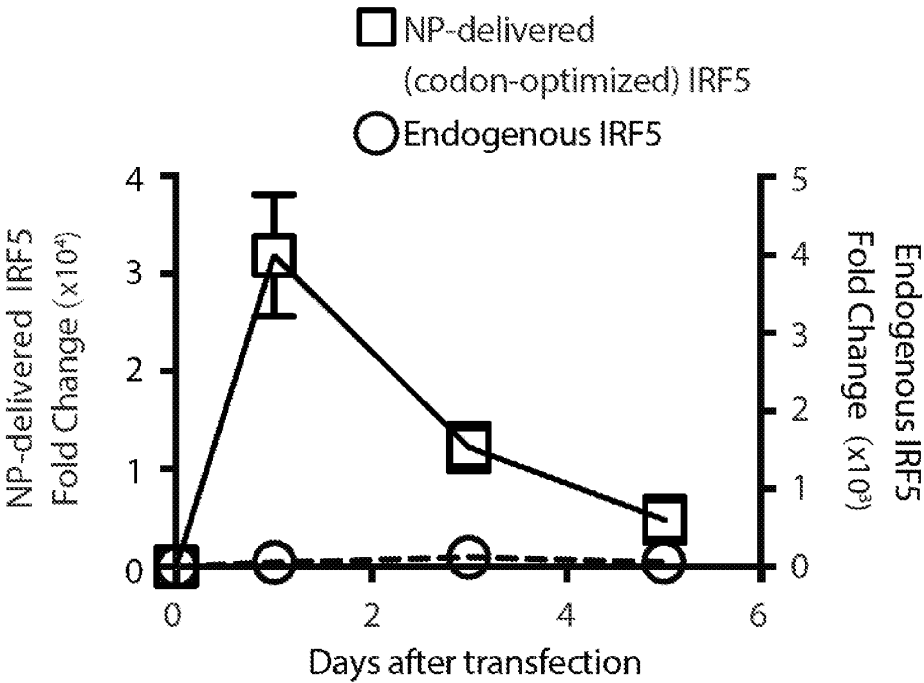


FIG. 2H

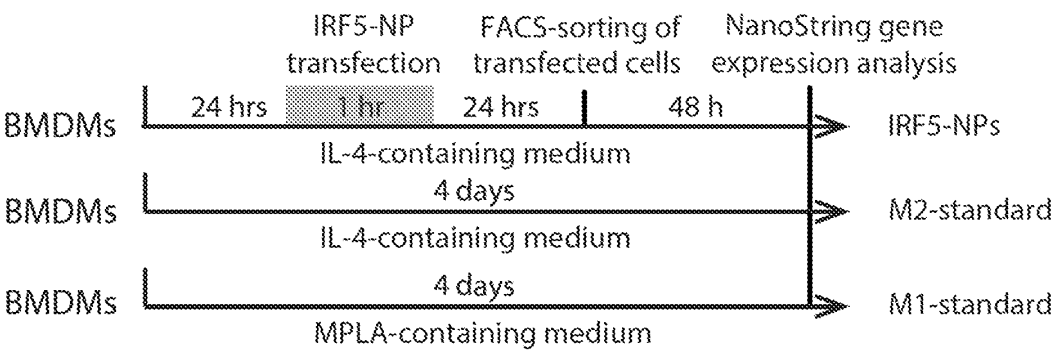


FIG. 2I

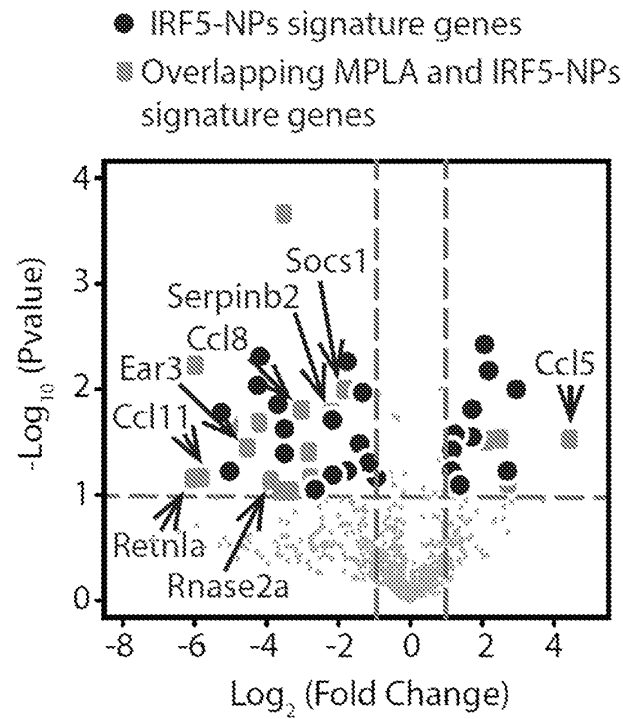


FIG. 2J

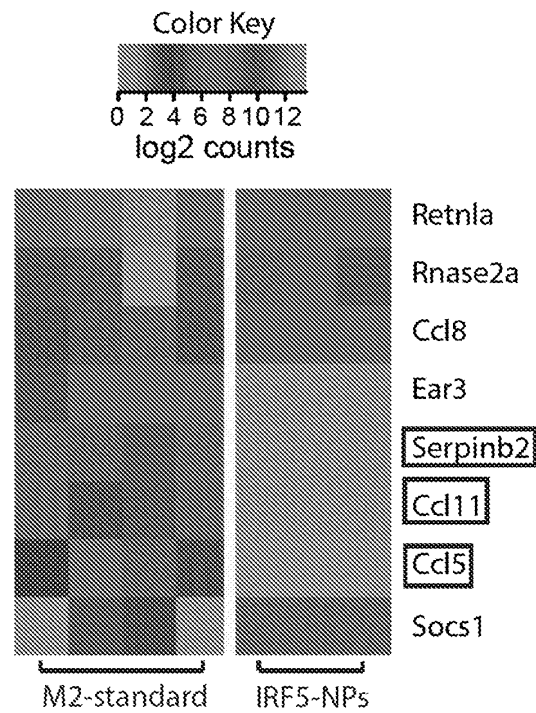
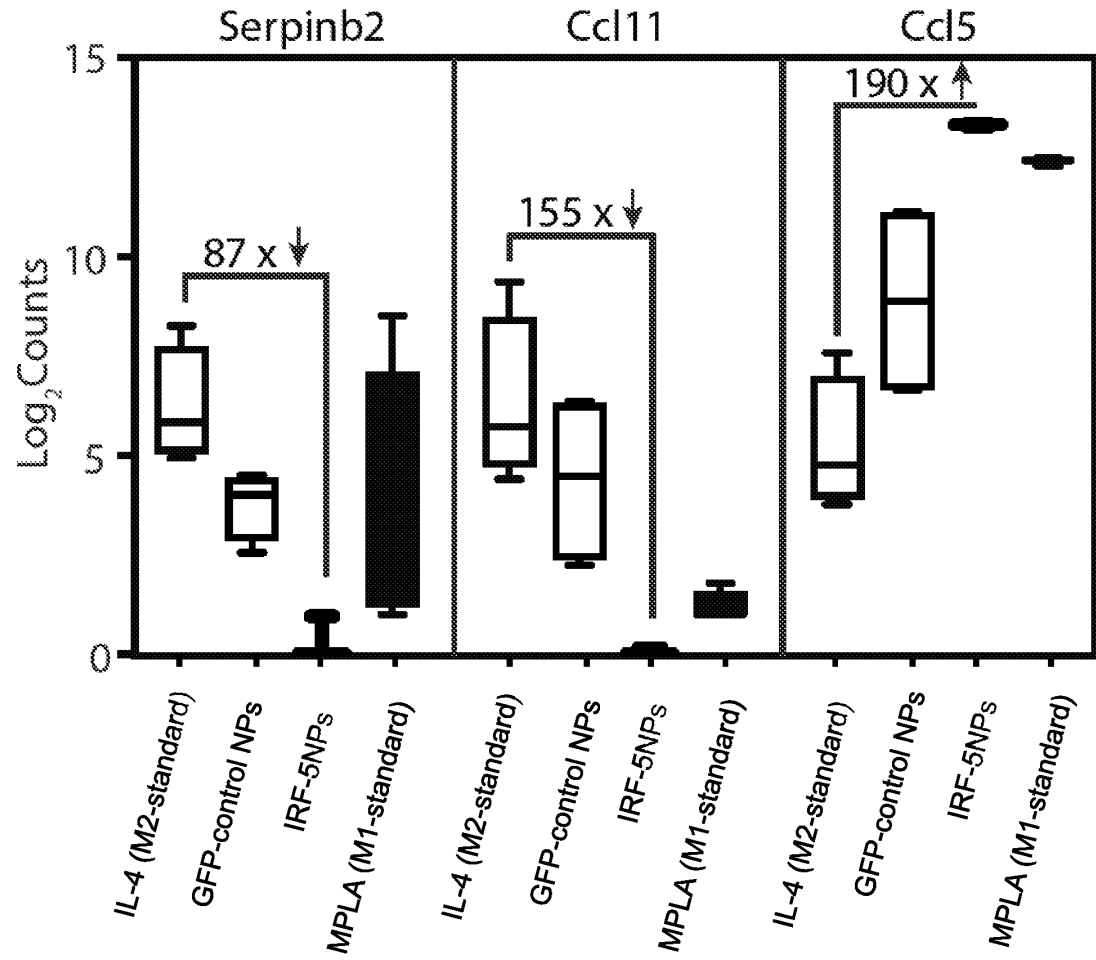


FIG. 2K



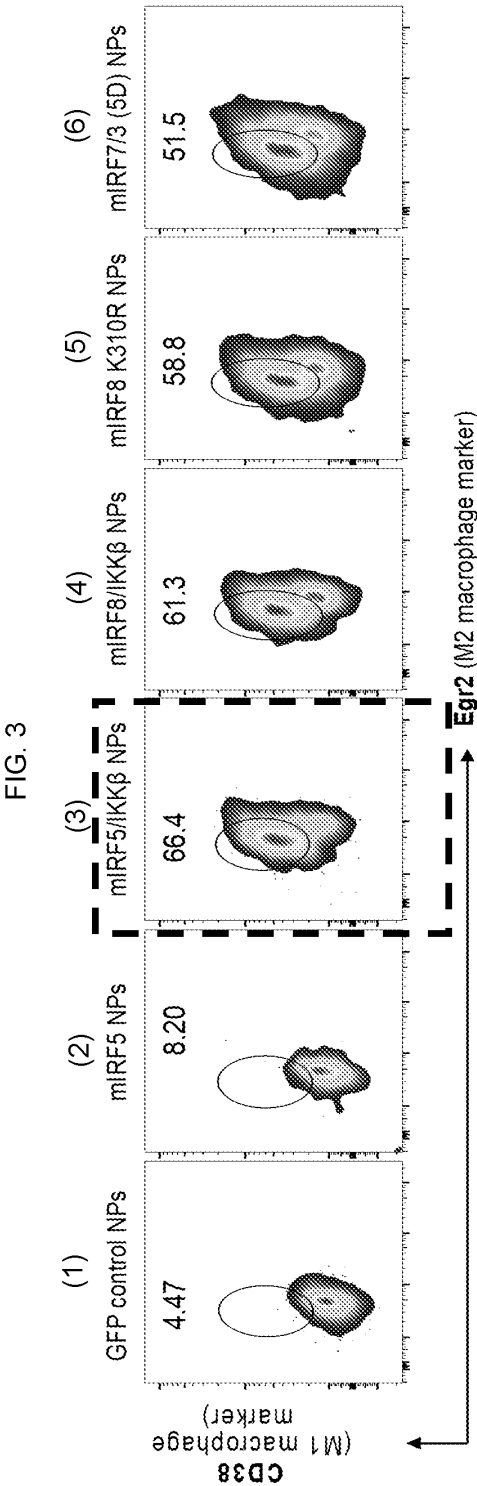


FIG. 4A

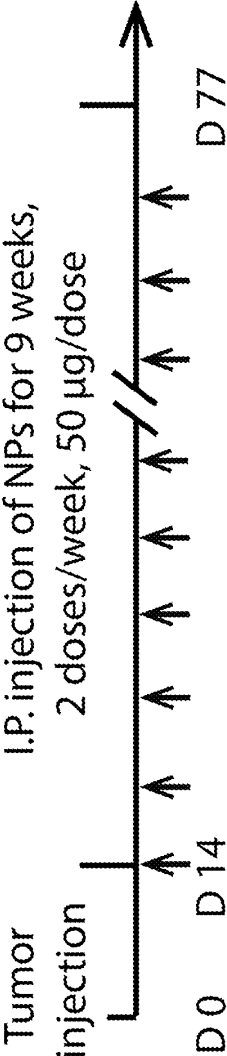


FIG. 4B

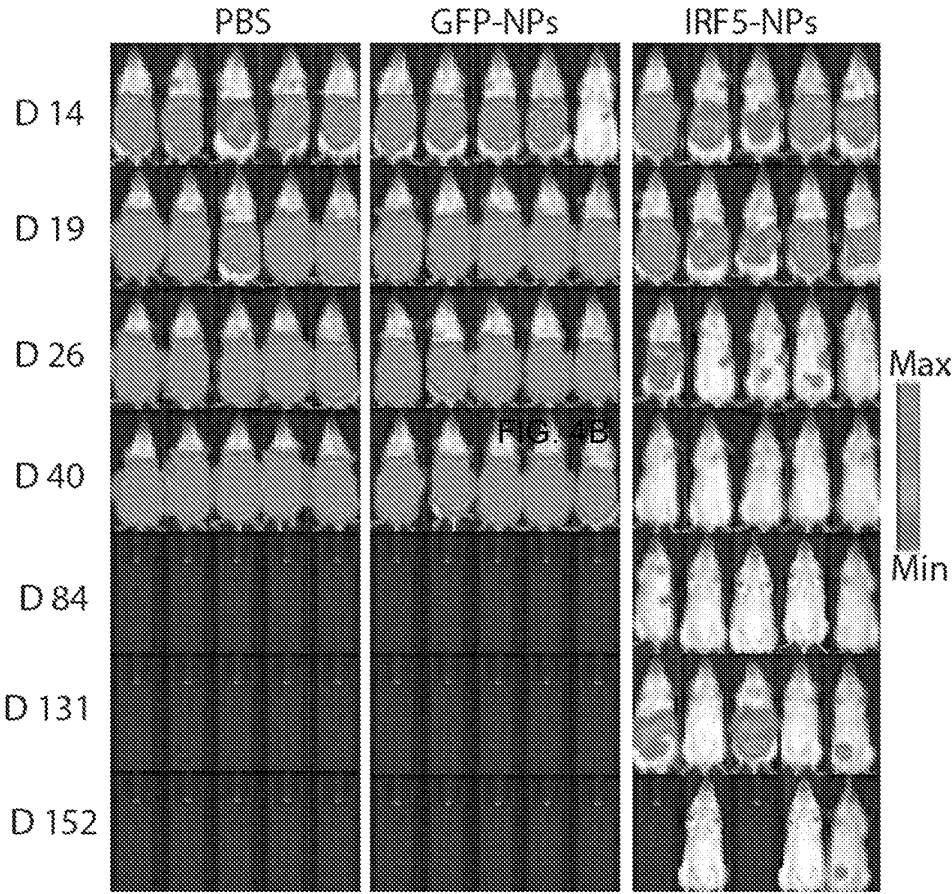


FIG. 4C

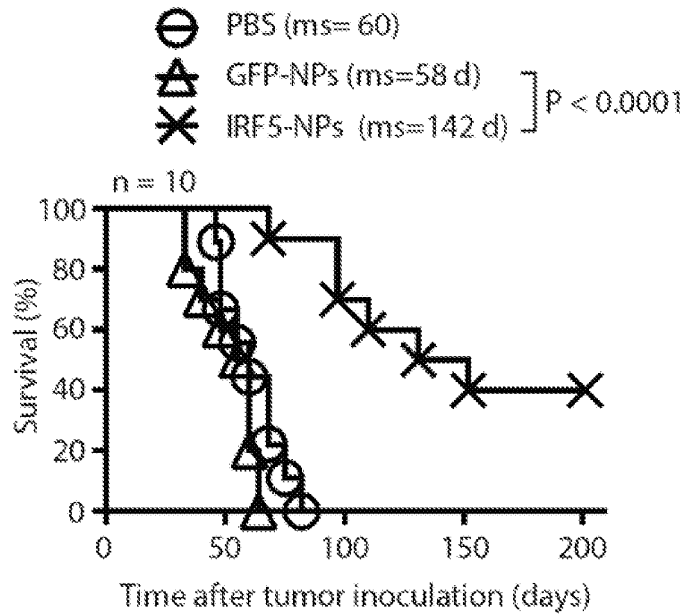


FIG. 4D

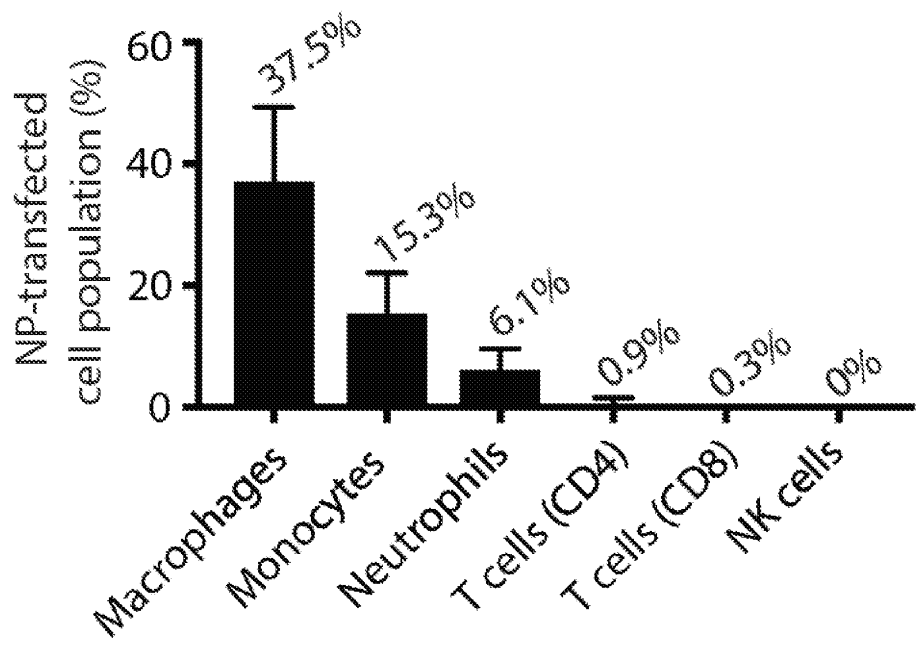


FIG. 4E

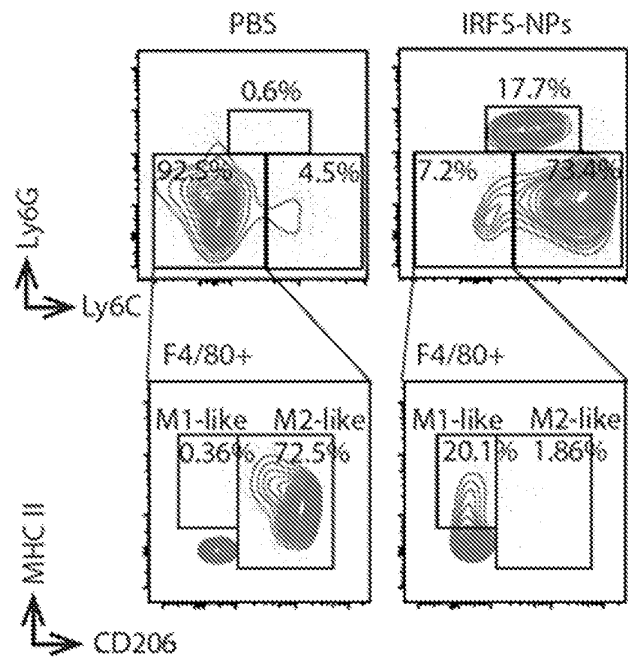


FIG. 4F

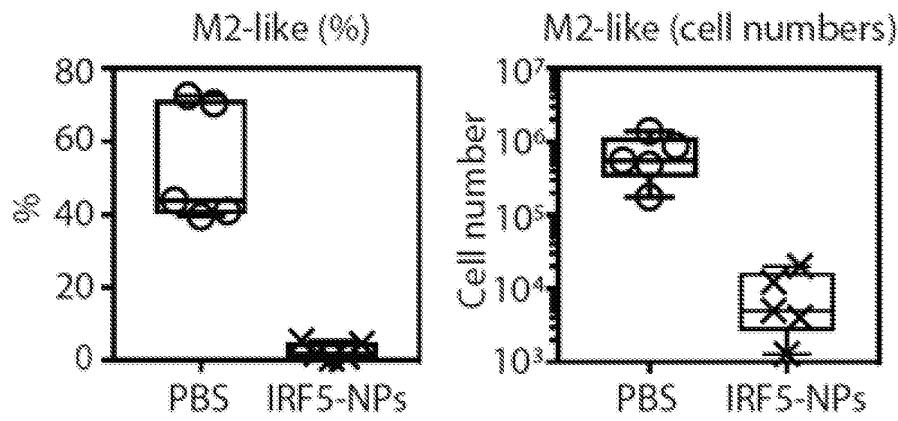


FIG. 4G

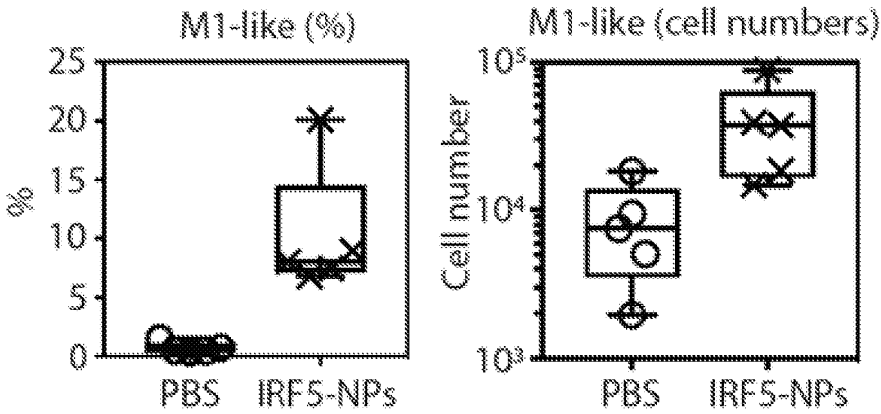


FIG. 4H

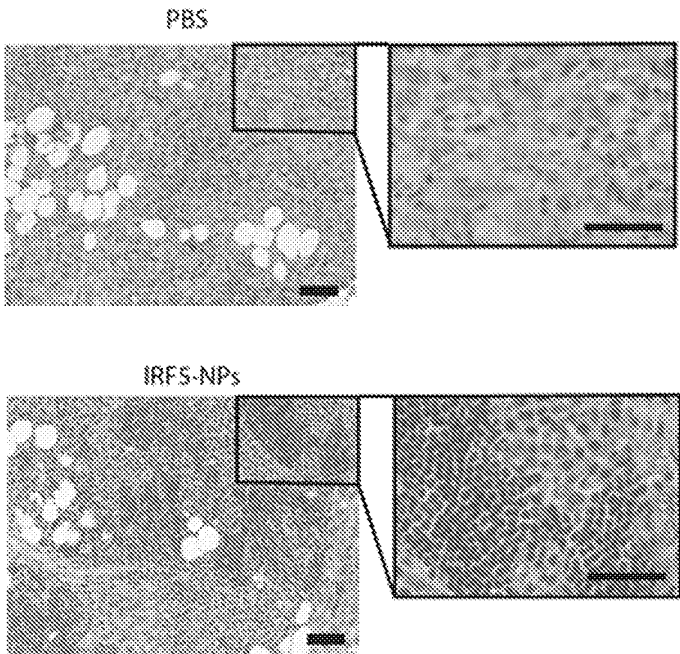


FIG. 4I

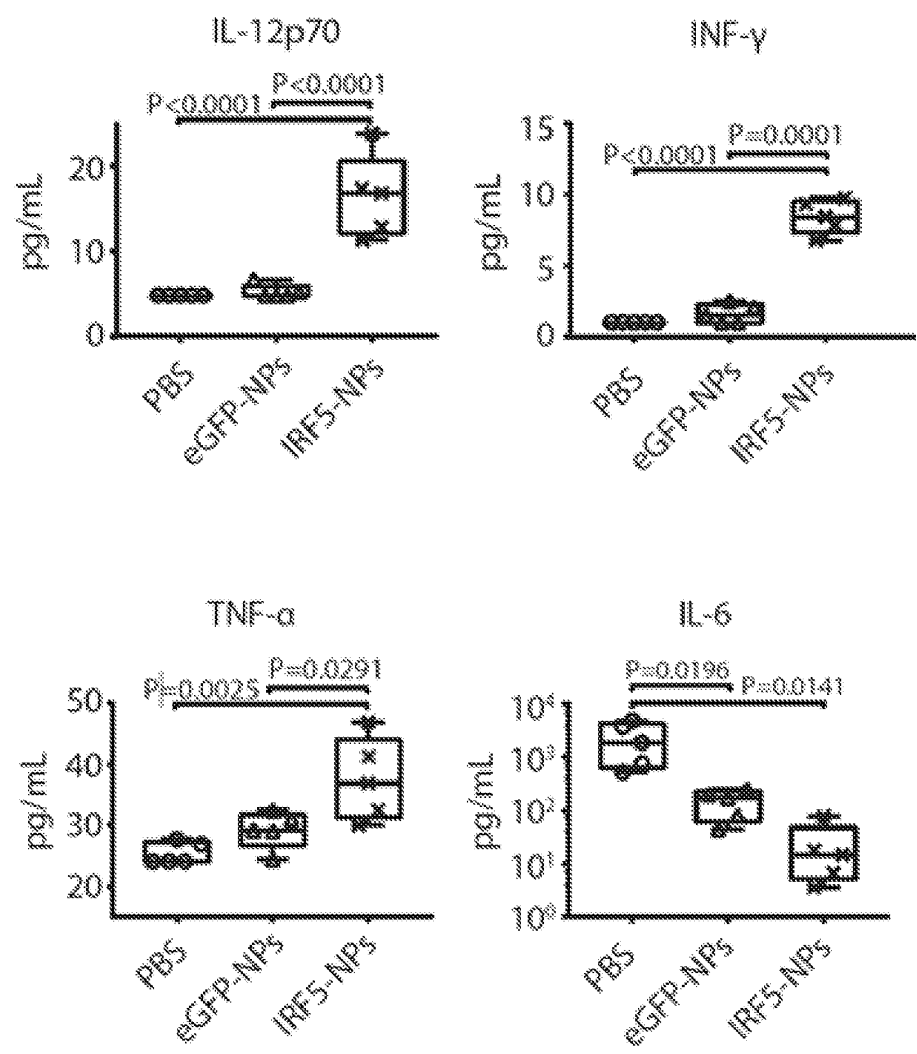


FIG. 4J

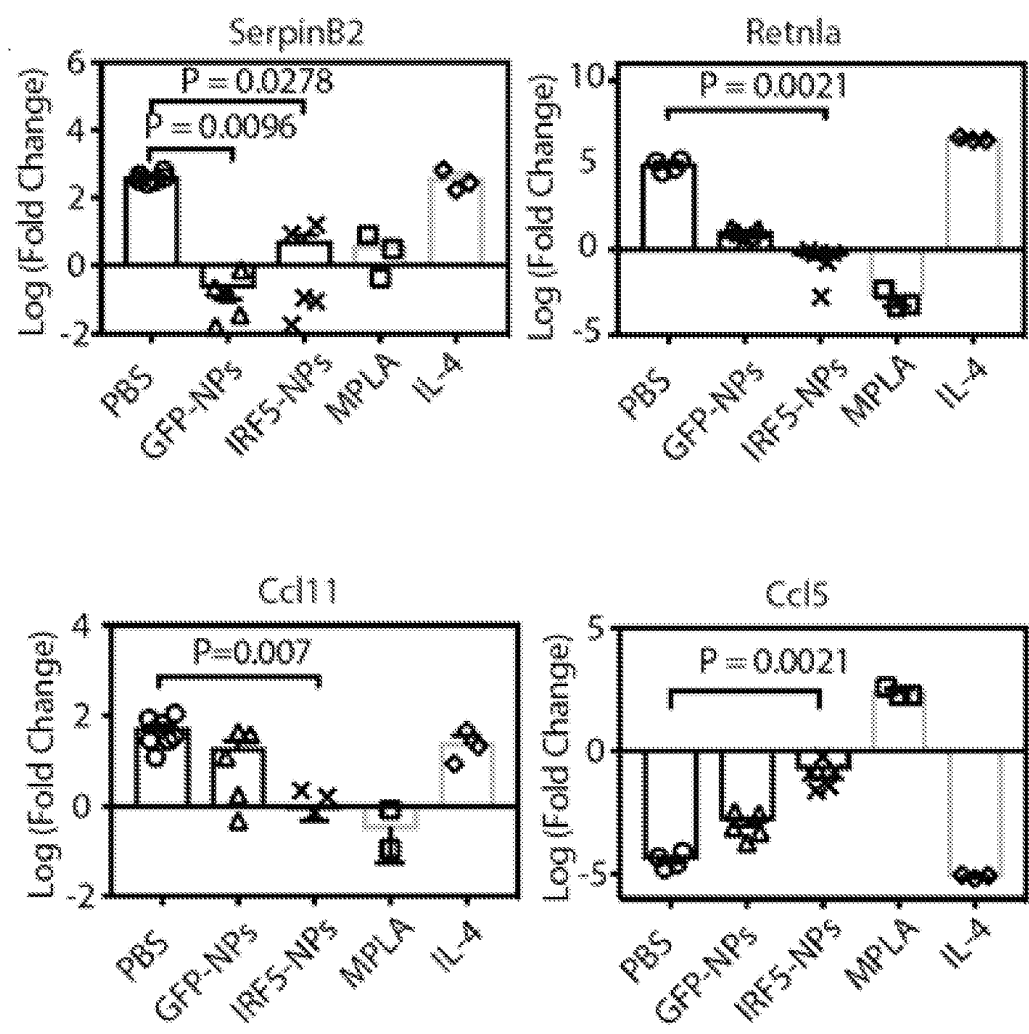


FIG. 5A

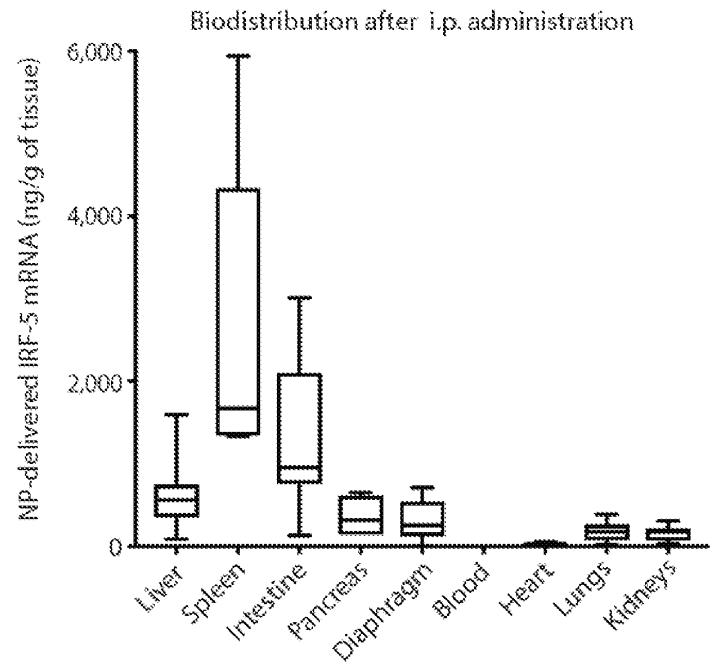


FIG. 5B

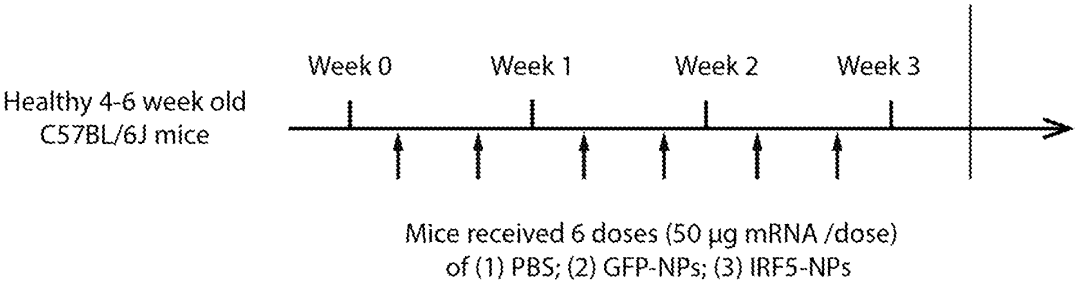
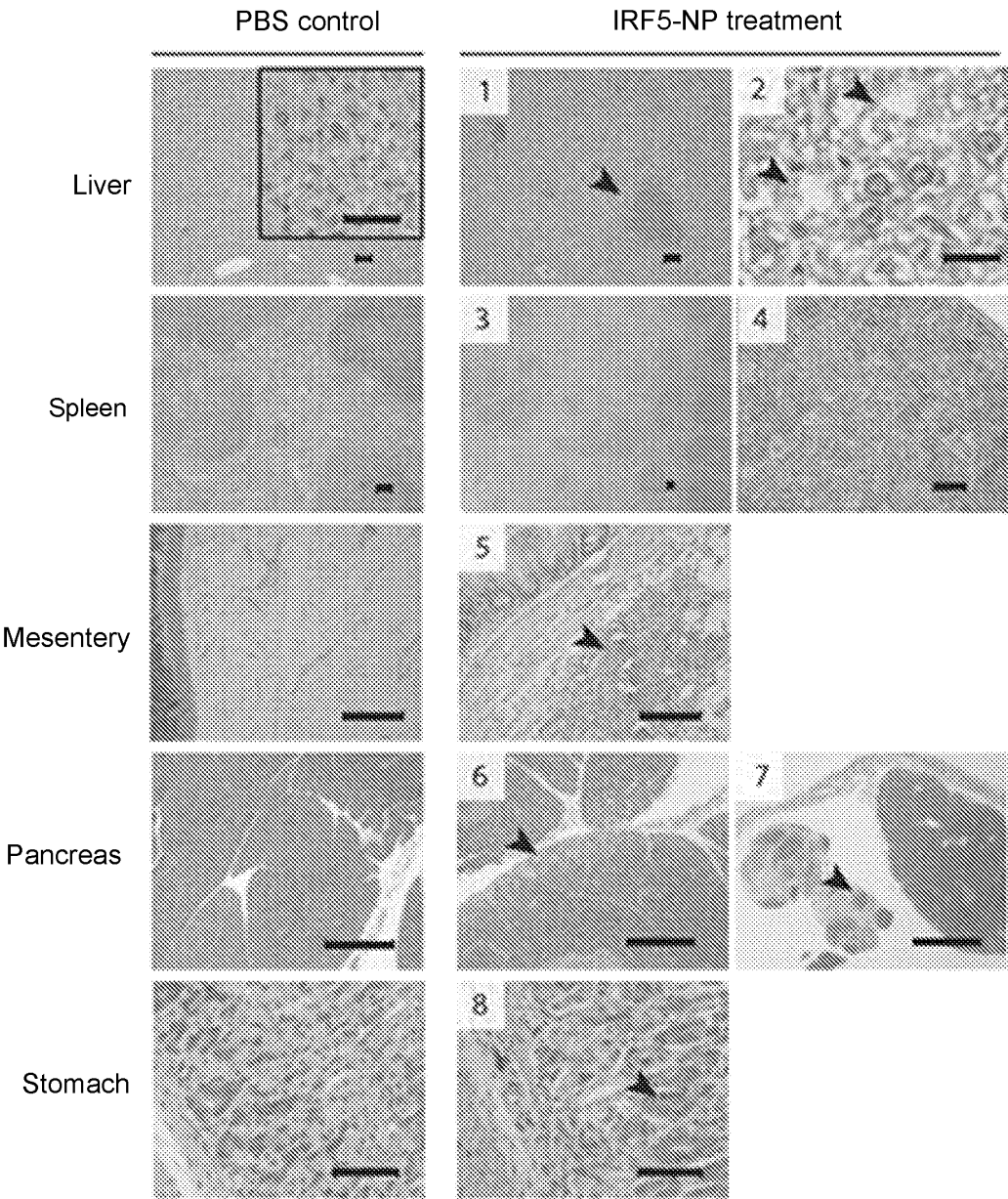


FIG. 5C



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FIG. 5D

Parameter	Unit	PBS	GFP-NPs	IRF5-NPs
WBC	K/uL	4.24	3.18	2.14
RBC	M/uL	9.13	8.83	7.95
HGB	g/dL	14.36	13.8	11.95
NEUCT	/uL	303.2	246	115.4
LYMCT	/uL	3849	2830	1960
MONCT	/uL	53.5	60.8	68
EOSCT	/uL	66.4	55.4	25.2
BASCT	/uL	0	0	0
ALP	U/L	99.4	99.4	62.4
ALT	U/L	45.75	41	54.25
AST	U/L	116	116	149.8
BUN	mg/dL	34.2	30.6	25.6

FIG. 5E

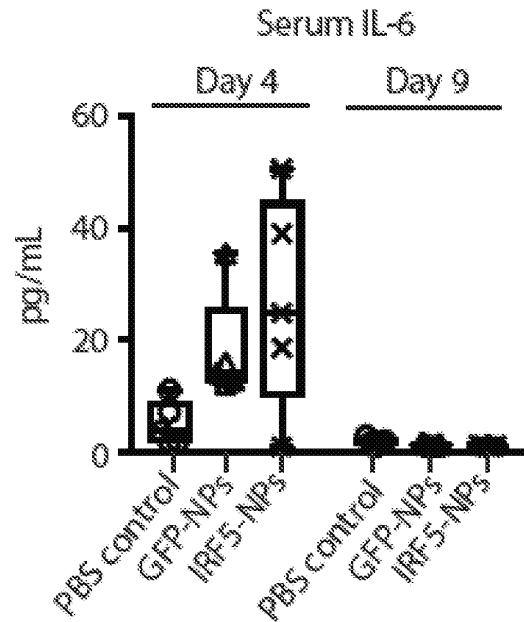
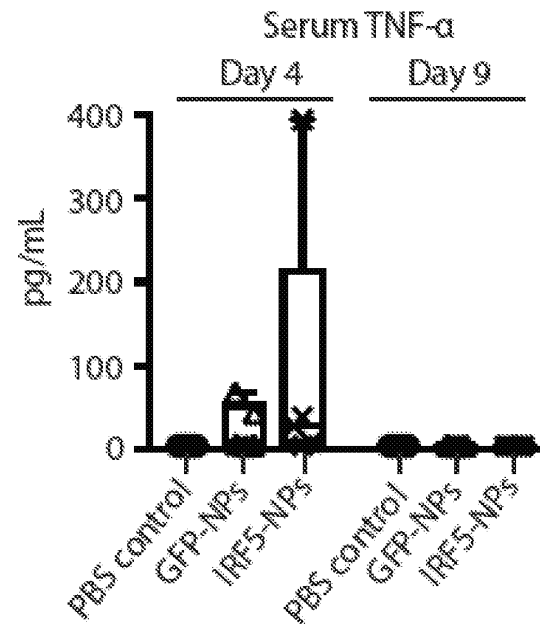


FIG. 5F



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FIG. 6A

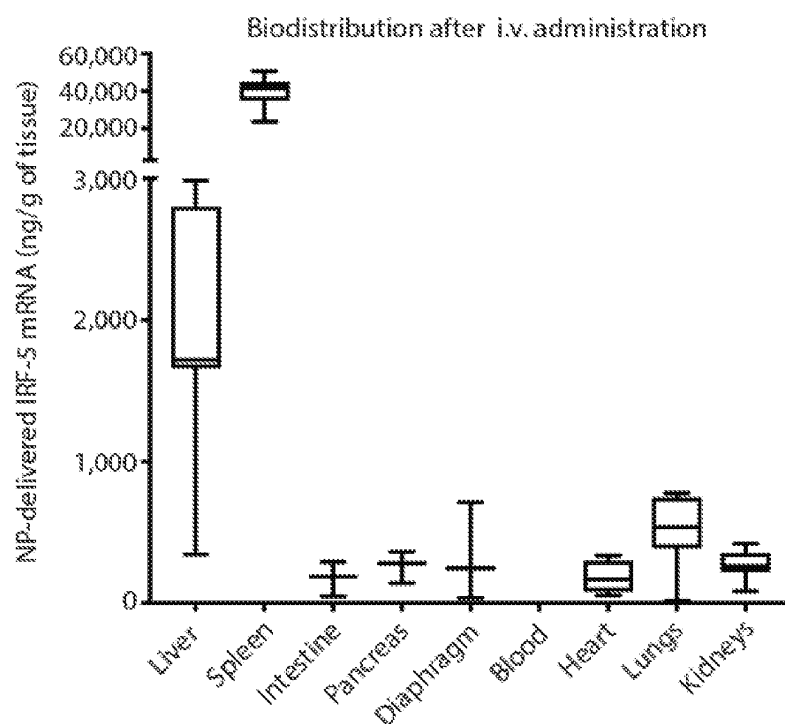
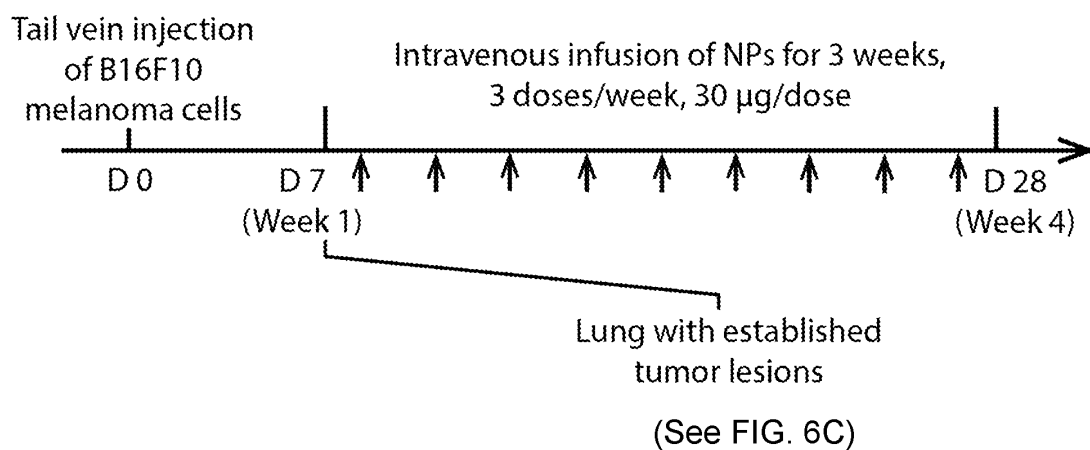


FIG. 6B



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FIG. 6C

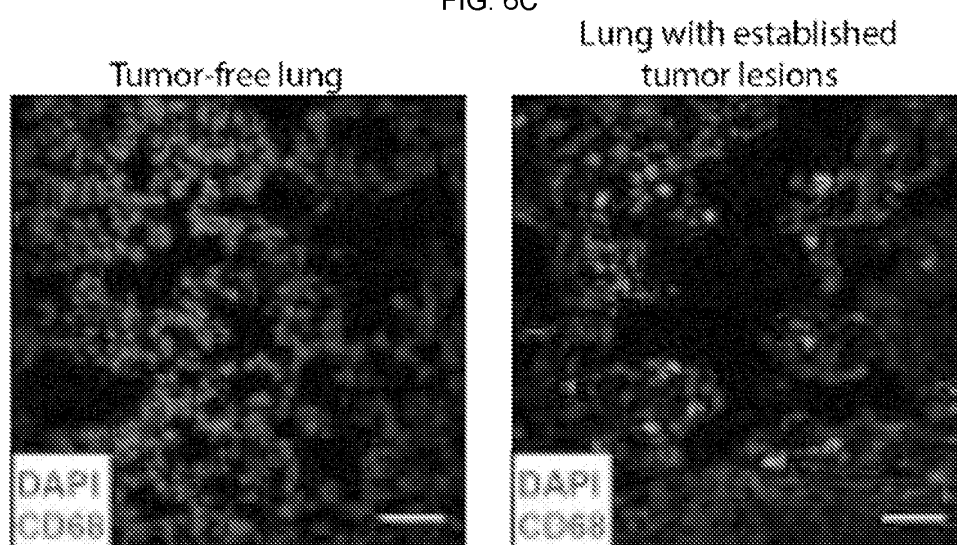


FIG. 6D

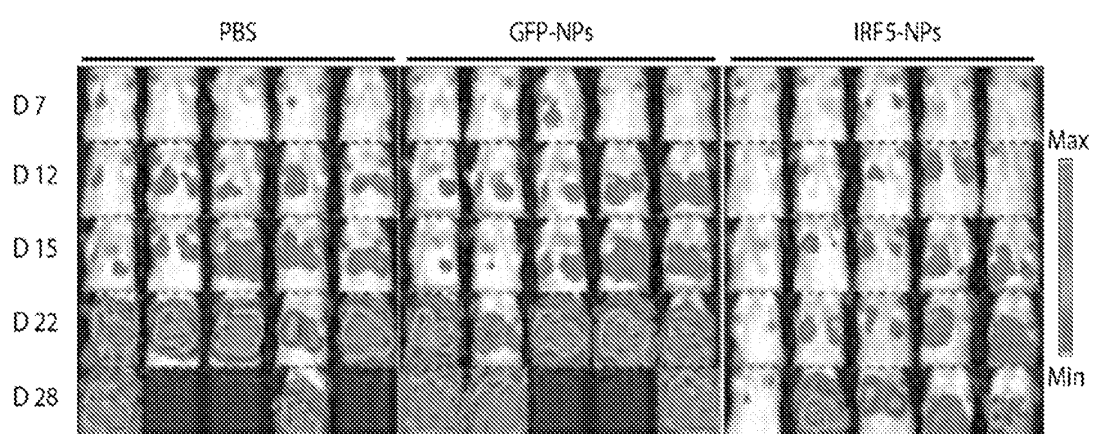


FIG. 6E

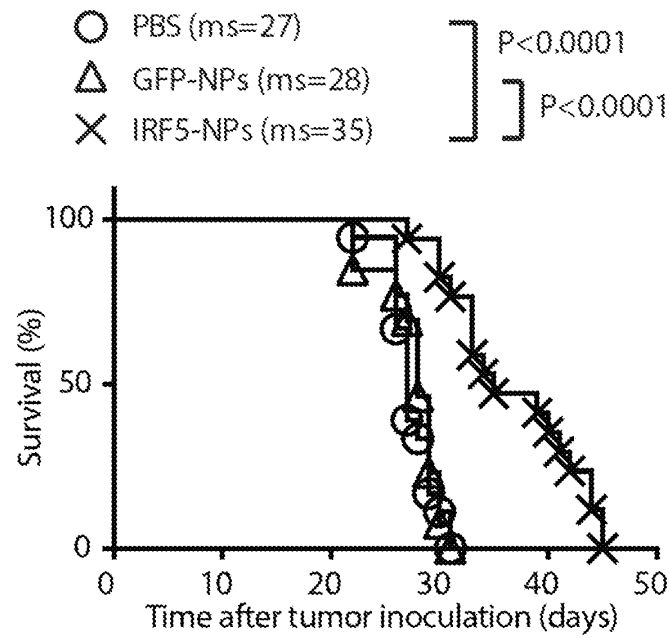
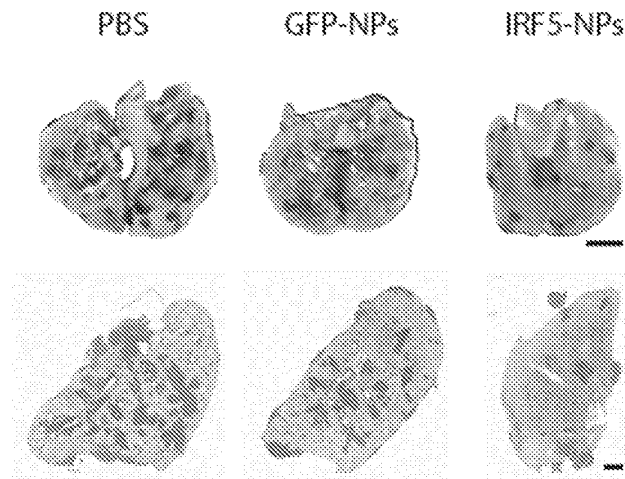
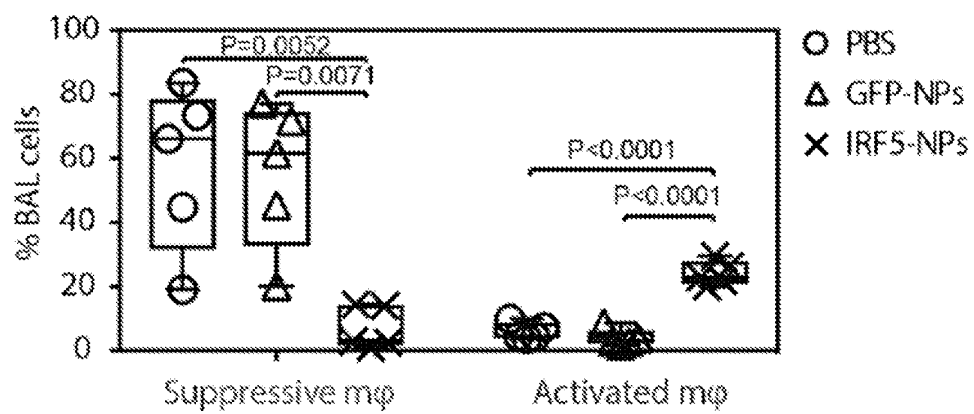


FIG. 6F



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FIG. 6I



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FIG. 7A

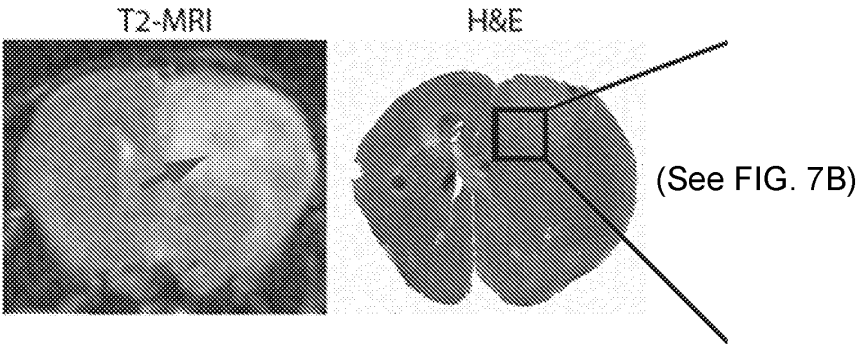


FIG. 7B

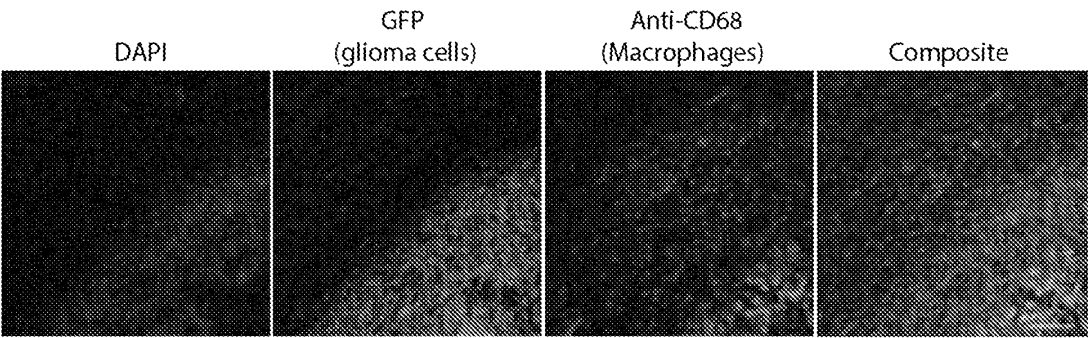


FIG. 7C

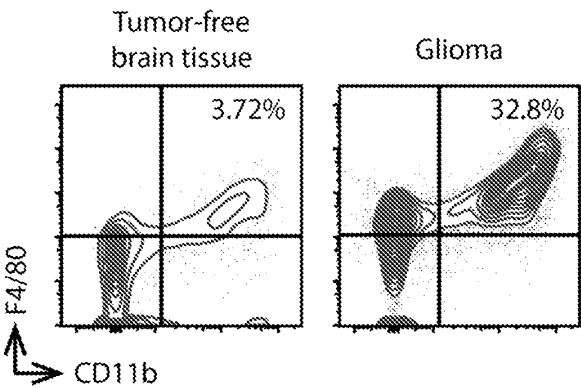


FIG. 7D

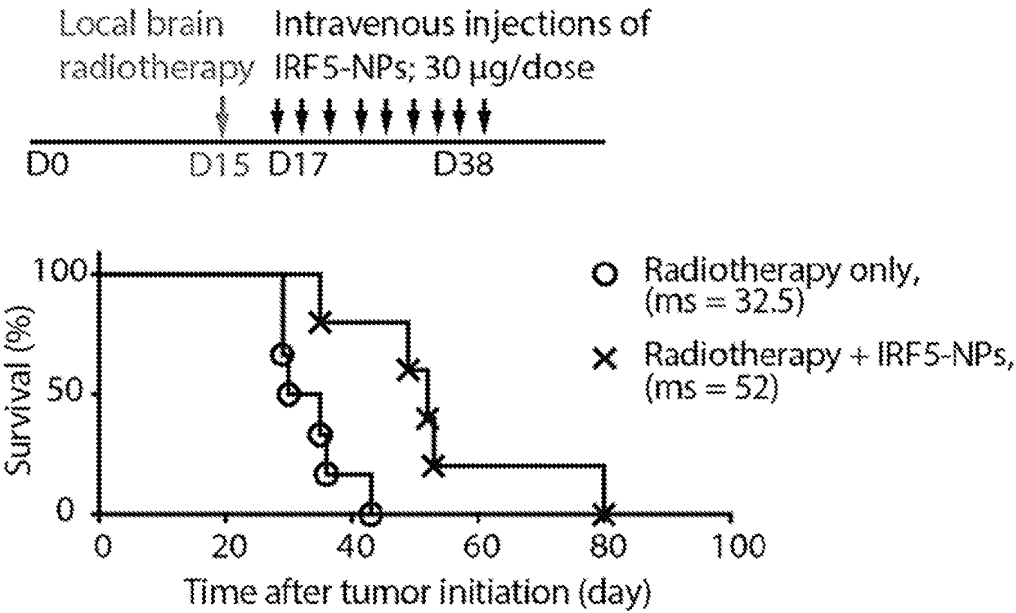
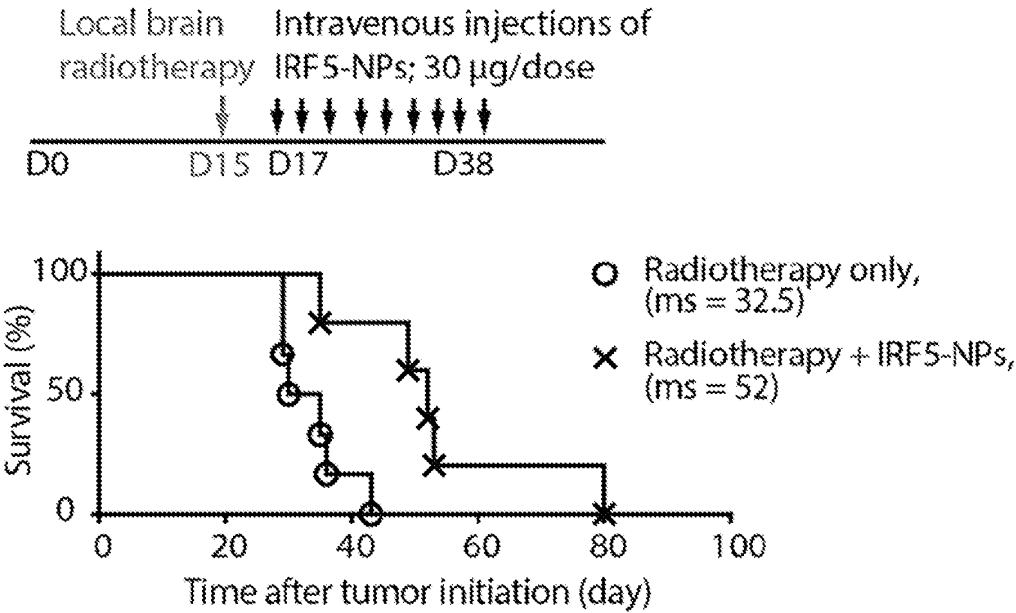


FIG. 7E



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FIG. 7F

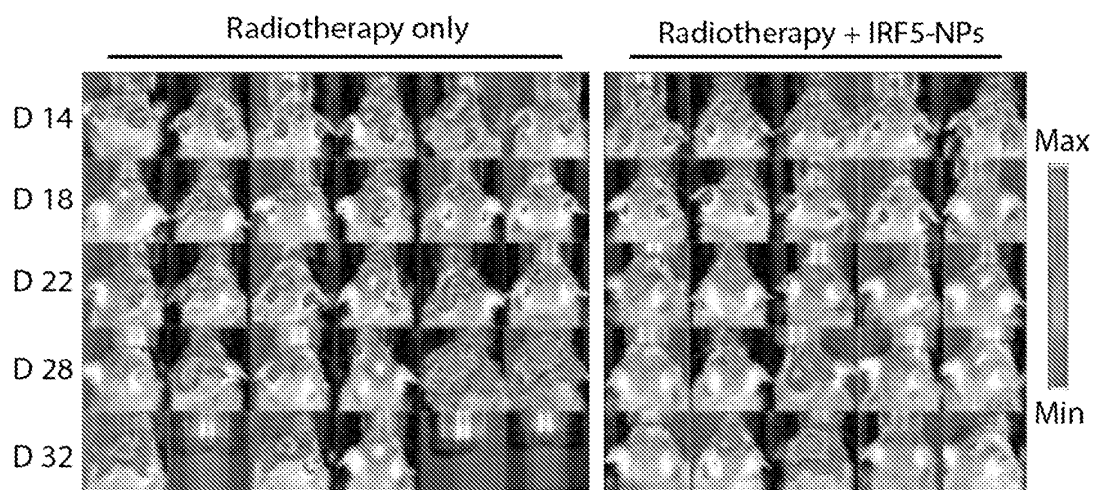
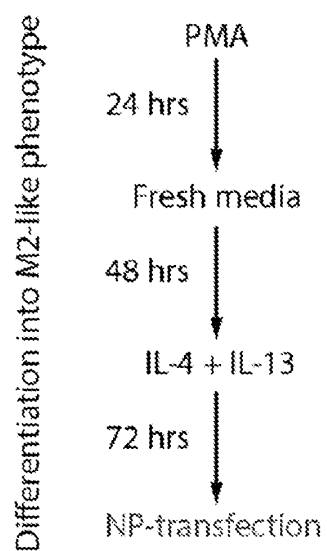


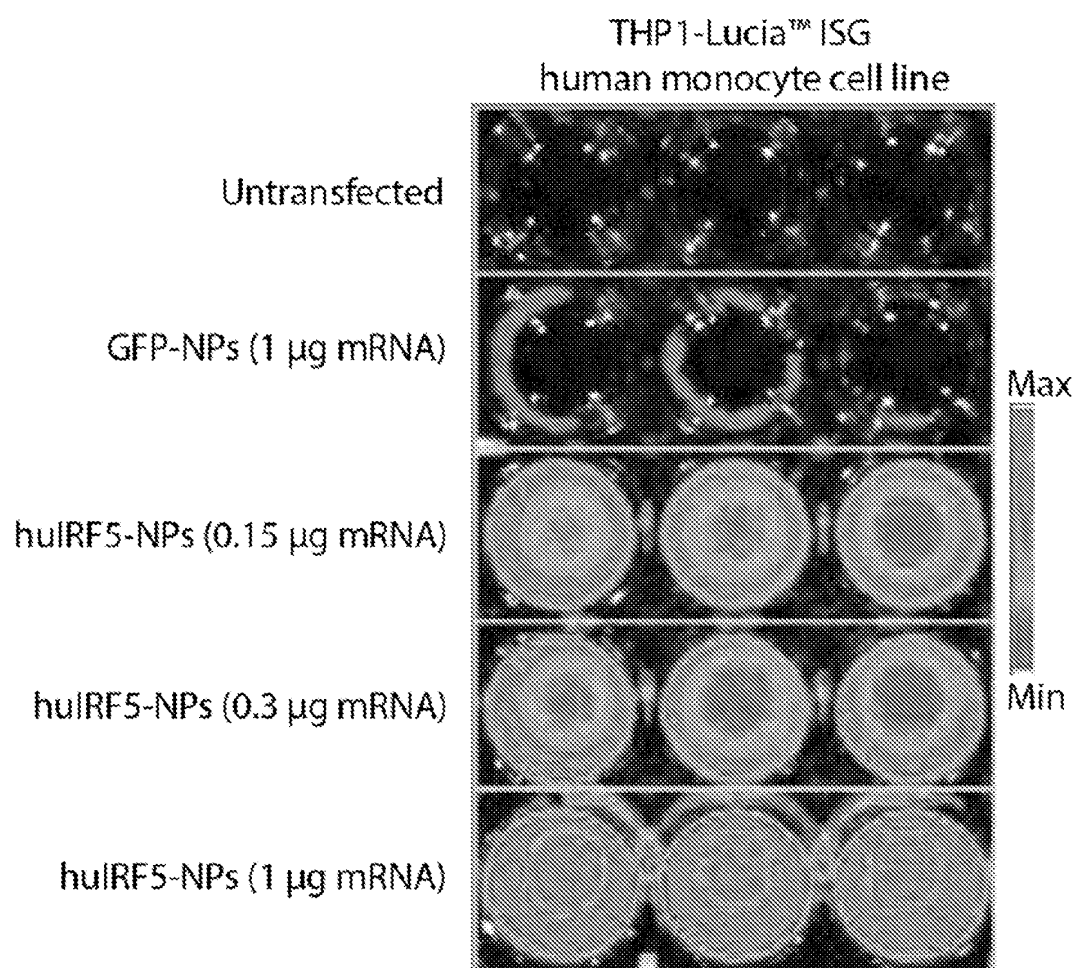
FIG. 8A

THP1-Lucia ISG (interferon-stimulated genes) express the secreted luciferase Lucia reporter gene under the control of an IRF-inducible promoter.



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FIG. 8B



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FIG. 8C

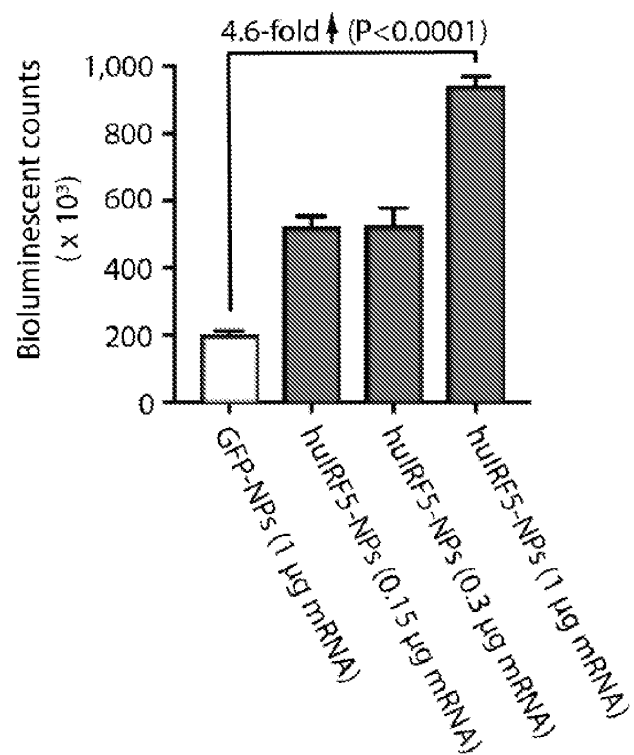


FIG. 8D

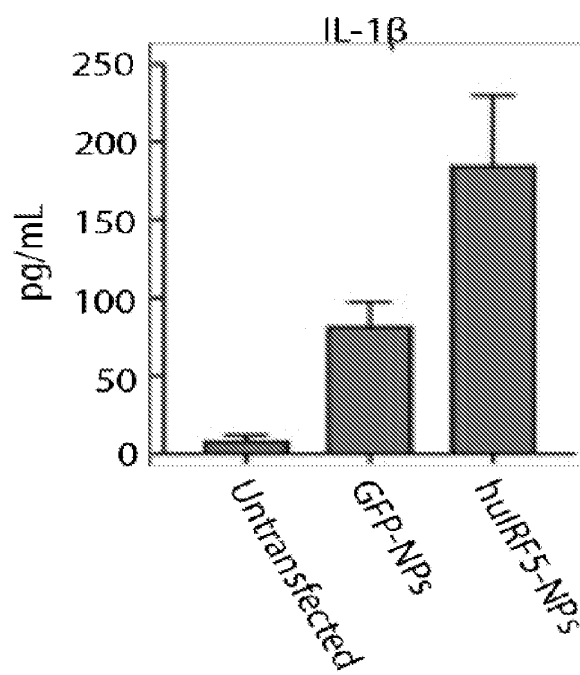


FIG. 8E

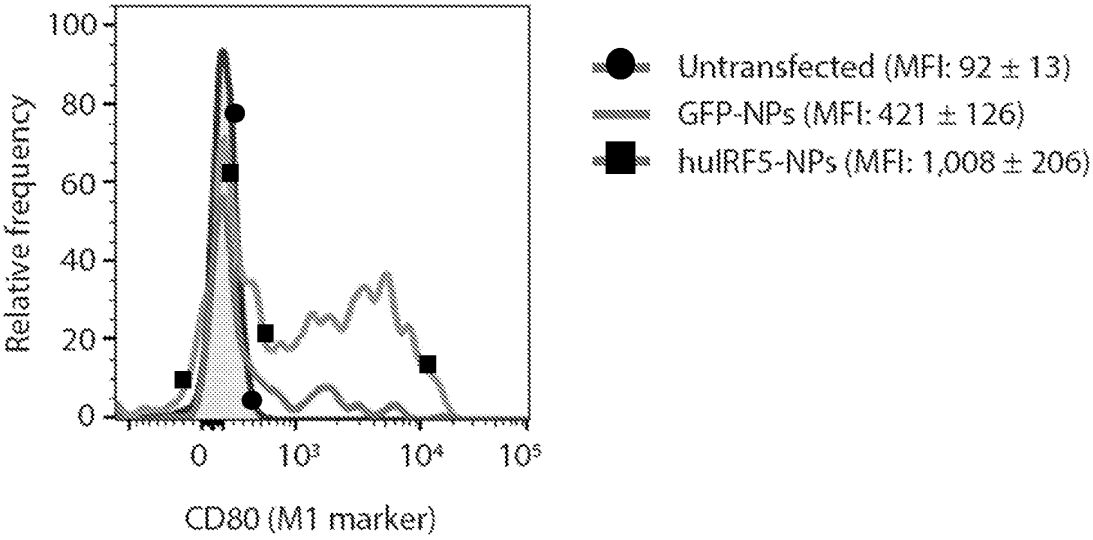
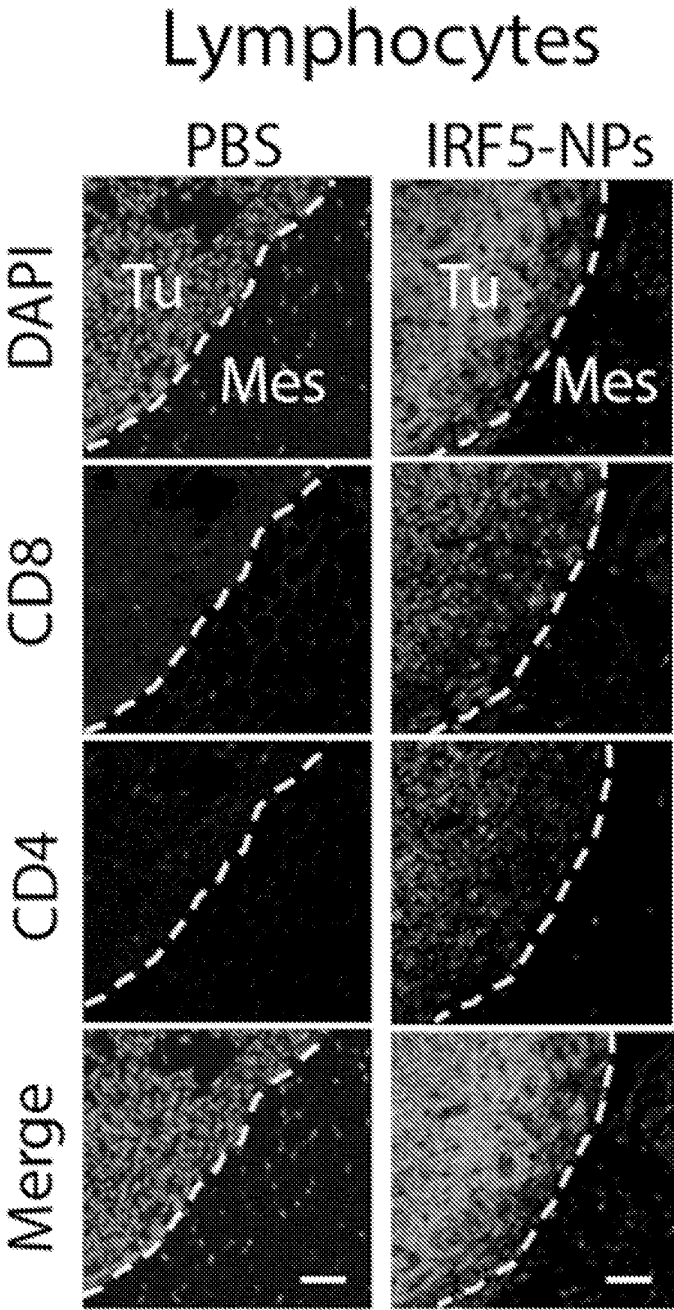


FIG. 9

Antibody Specificity	Clone	Isotype	Dilution	Dye	Supplier	Catalog#
Myeloid Panel						
CD45	30-F11	Rat IgG2b, k	1:800	eFluor 450	eBioscience	48-0451
MHC I-AI-E	M5/114.15.2	Rat IgG2b, k	1:400	AlexaFluor700	Biologend	107622
CD11b	M1/70	Rat IgG2b, k	1:200	APC	BD Biosciences	557657
CD11c	N418	Arm Ham IgG	1:200	PE-CF594	BD Biosciences	562454
Ly6C	HK1.4	Rat IgG2a, k	1:200	PerCP-Cy5.5	eBioscience	45-4932
Ly6G	1A8	Rat IgG2a, k	1:200	APC-Cy7	Biologend	127624
CD38	90/CD38	Rat IgG2a, k	1:200	BUV395	BD Biosciences	740245
CD206	C0682C2	Rat IgG2a, k	1:200	PE-Dazzle 594	Biologend	141732
Live/Dead Fixable Green	-	-	1:800	FITC	Life Technologies	L23101
Lymphoid Panel						
CD45	30-F11	Rat IgG2b, k	1:800	eFluor 450	eBioscience	48-0451
CD335 (Nkp46)	29A1.4	Rat IgG2a, k	1:200	BUV737	BD	565085
CD4	RM4-5	Rat IgG2a, k	1:400	PerCP-Cy5.5	Biologend	100540
CD44	IM7	Rat IgG2b, k	1:400	PE-CF594	BD	562464
CD49B	HMa2	Ham IgG	1:200	BUV395	BD	740250
CD62L	MEL-14	Rat IgG2a, k	1:200	APC-Cy7	Biologend	104428
CD8	53-6.7	Rat IgG2a, k	1:400	APC	Biologend	100712
TCR- β chain	B20.6	Rat IgG2a, k	1:400	PE	Biologend	127908
Live/Dead Fixable Green	-	-	1:800	FITC	Life Technologies	L23101
Other antibodies						
F4/80	BM8	Rat IgG2a, k	1:400	PE	eBioscience	12-4801
7AAD	-	-	1:400	-	Biologend	420404
Trustain fcX	93	Rat IgG2a, k	1:400	-	Biologend	101320

FIG. 10A



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FIG. 10B

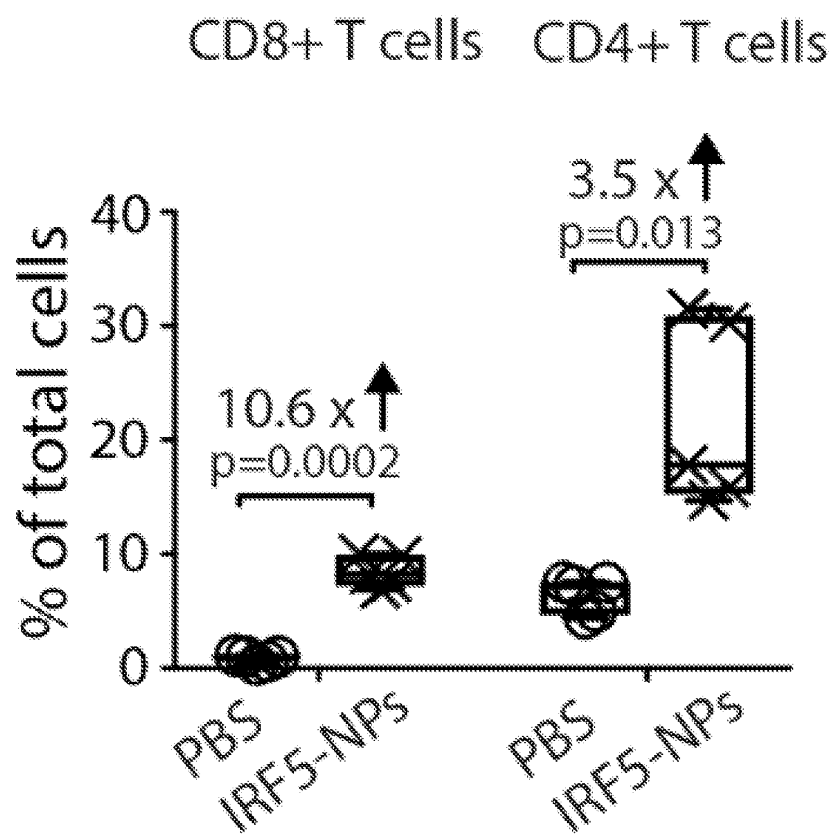


FIG. 11

>Human IRF5 Isoform 6 (UniProt Accession Q13568-6)

MNQSIPVAPTPRRVRLKPWLVAQVNSCQYPGLQWVNGEKKLFCIPWRHATRHGPSQDGDNTIF
KAWAKETGKYTEGVDEADPAKWKANLRCALNKS RDFRLIYDGPRDMPPQPYKIYETPSPLRITLLV
QERRRKRKSCRGCCQA (SEQ ID NO: 6)

>Murine IRF5 protein (pI=5.19, Mw = 56005, UniProt Accession P56477)

MNHSAPGIPPPRRVRLKPWLVAQVNSCQYPGLQWVNGEKKLFYIPWRHATRHGPSQDGDNTIF
KAWAKETGKYTEGVDEADPAKWKANLRCALNKS RDFQLFYDGPRDMPPQPYKIYEVCSNGPAPT
ESQPTDDYVLGEEEEEEEEELQRMPLGLSITEPALGPPNAPYSLPKEDTKWPPALQPPVGLGPP
VPDPNLLAPPSGNPAGFRQLLPEVLEPGPLASSQPPTPELLPDLLISPHMLPLTDLEIKFYRGRAP
RTLISNPQGCRFLFYSQLQLEATQEQVELFGPVTLEQVRFPSPEDIPSDKQRFYTNQLLDVLDRLILQ
LQGQDLYAIRLCQCKVFWSGPCALAHGSCPNPIQREVKTCLFSLEQLNELILFQKGQNTNPPPEI
FFCFGEEWPDVKPREKKLITVQVVPVAARLLLEMFSGELSWADSIRLQISNPDLKDHMVEQFKEL
HHLWQSQQLQPMVQAPPVAGLDASQGPWPMHPVGMQ (SEQ ID NO: 7)

>Human IRF1 (UniProt Accession P10914)

MPITRMRMRPWLEMQINSNQIPGLIWINKEEMIFQIPWKHAAKHGWDINKDACLFRSWAIHTGRYK
AGEKEPDPKTWKANFRCAMNSLPDIEEVKDQSRNKGSSAVRVYRMLPPLTKNQRKERKSKSSRD
AKSKAKRKSCGDSSPDTFSDGLSSSTLPDDHSSYTPGYMQDLEVEQALTPALSPCAVSSTLPDW
HIPVEVVPDSTSDLYNFQVSPMPSTSEATDDEDEEGKLPEDIMKLLSEQSEWQPTNVDGKGYLLNEP
GVQPTSVYGD FSCKEEPEIDSPGGDIGLSLRVFTDLKNMDATWLDSLTPVRLPSIQAI PCAP
(SEQ ID NO: 8)

>Human IRF3 isoform 1 (UniProt Accession Q14653-1)

MGTPKPRILPWLVSQLDLGQLEGVAWVNKSRTFRIPWKHGLRQDAQQEDFGIFQAWAEATGAY
VPGRDKPDLPTWKRNFRCALNRKEGLRLAEDRSKDPHDPHKIYEFVNSGVGDFSQPDTSPTNG
GGSTSDTQEDILDELLGNMVLAPLPDPGPPSLAVAPEPCPQLRSPSLDNPTFPNLPSENPLKR
LLVPGEWEFEVTA FYRGRQVFQQTISCPEGLRLVGSEVGDRTPGWPVTLDPGMSLTDRGVM
SYVRHVLSCGGGLALWRAGQWLWAQRLGHCHTYWAVSEELLPSNGHGPDPGEVPKDEGGVF
DLGPFIVDLITFTEGSGRSPRYALWFCVGESWPQDQPWTKRLVMVKVPTCLRALVEMARVGGA
SSLENTVDLHISNSHPLSLTSDQYKAYLQDLVEGMDFQGPGES (SEQ ID NO: 9)

>Human IRF7 isoform A (UniProt Accession Q92985-1)

MALAPERAAPRVLFGEWLLGEISSGCEGLQWLDEARTCFRVPWKHFARKDLSEADARIFKAWAV
ARGRWPPSSRGGGPPPEAETAERAGWKTNFRCALRSTRRFVMLRDNSGDPADPHKVYALSREL
CWREGPGTDQTEAEAPAAVPPPQGGPPGPFLAHTHAGLQAPGPLPAPAGDKGDL LLQAVQQSCL
ADHLLTASWGADPVPTKAPGEGQEGLPLTGACAGGPGLPAGELYGWAVETTPSPGPQPAALTTG
EAAAPESPHQAEPYLSPPSACTAVQEPSPGALDVTIMYKGRTVLQKVVGHPSCFTLYGPPDPAV
RATDPQQVAFPSPAELPDQKQLRYTEELLRHVAPGLHLELRGPQLWARRMGKCKVYWEVGGPP
GSASPSTPACLLPRNCDTPIFDFRVFFQELVEFRARQRRGSPRYTIYLGFGQDLSAGRPKEKSLVL
VKLEPWLCRVHLEGTQREGVSSLDSSSLSLCLSSANSLYDDIECFLMELEQPA (SEQ ID NO: 10)

>Human IRF8 (UniProt Accession Q02556)

MCDRNGGRRLRQWLIEQIDSSMYPGLIWENEEKSMFRIPWKHAGKQDYNQEVDA SIFKAWAVFK
GKFKEGDKAEPATWKTRLRCALNKSPDFEEVTD RSQLDISEPYKVYRIVPEEEQCKLGVATAGC
VNEVTEMECGRSEIDELIKEPSVDDYMGMIKRSPSPPEACRSQLLPDWWAQQPSTGVPLVTGYTT
YDAHHSAFSQMVISFYGGKLVGQATTTCPGECRLSLSQPGLPGTKLYGPEGLELVRFPADAIPS
ERQRQVTRKLFHGLERGVLLHSSRQGVFVKRLCQGRVFCSGNAVVC KGRPNKLERDEVVQVFDT
SQFFRELQQFYNSQGRLPDGRVVLFCGEEFPDMAPLR SKLILVQIEQLYVRQLAEEAGKSCGAGS
VMQAPEEPPPDQVFRMFPDICASHQRSFFRENQQITV (SEQ ID NO: 11)

FIG. 11 CONT'D

>Murine IRF1 (UniProt Accession P15314)

MPITRMRMRPWLEMQINSNQIPGLIWINKEEMIFQIPWKHAAKHGWDINKDACLFERSWAIHTGRYK
AGEKEPDPKTWKFANFRFCAMNSLPDIEEVKDQSRNKGSSAVRVYRMLPPLTRNQRKERKSKSSRD
TKSKTKRKLCDVSPDTFSDGLSSSTLPDDHSSYTTQGYLGQDLDMERDITPALSPCVVSSSLSE
WHMQMDIIPDSTTDLYNLQVSPMPSTSEAATDEDEEGKIAEDLMKLFQSEWQPTHIDGKGYLLNE
PGTQLSSVYGDFSCKEEPEIDSPRGDIGIGIQHVFTMKNMDSIMWMDSLLGNSVRLPPSIQAIPCA
P (SEQ ID NO: 12)

>Murine IRF3 (UniProt Accession P70671)

METPKPRILPWLVSQLDLGQLEGVAWLDESRTFRIPWKHGLRQDAQMADFGIFQAWAEASGAY
TPGKDKPDVSTWKRNFRCALNRKEVLRLAADNSKDPYDPHKVYEFVTPGARDFVHLGASPDNTG
KSSLPHSQENLPKLFDDLGLPLKDEGSSDLAIVSDPSQQLPSPNVNLFNPAPQENPLKQLLAAEQ
WEFEVTAIFYRGRQVFQQTLCFPGGLRLVGSTADMTLPWQPVTLDPPEGFLTDKLVKEYVGQVLK
GLGNGLALWQAGQCLWAQRLGHSHAFWALGEELLPDSEGRGPDGEVHKDKDGAVFDLRPFVADLI
AFMEGSGHSPRYTLWFCMGEMWPQDQPWWKRLVMVKVPTCLKELLEMAREGGASSLKTVDLH
ISNSQPISTSDQYKAYLQDLVEDMDFQATGNI (SEQ ID NO: 13)

>Murine IRF7 (UniProt Accession P70434)

MAEVRGVQRVLFQDWLLGEVSSGQYEGQLQWLNEARTVFRVPWKHFGRRLDDEEDAQIFKAWAV
ARGRWPPSGVNLPPPEAAEAERRRRGWKTNFRCALHSTGRFILRQDNSGDPVDPHKVYELSRE
LGSTVGPATENREEVSLSNALPTQGVSPGSFLARENAGLQTPSPLLSSDAGDLLQVLQYSHILES
ESGADPVPPQAPGQEQDRVYEEPYAAWQVEAVSPSRPQQPALTERSLGFLDVTIMYKGRTVLQA
VVGHPRCVFLYSPMAPAVRTSEPQPVIFPSPAELPDQKQLHYTETLLQHVSPGLQLELRGPSLWAL
RMGKCKVYWEVGSPMGTTPSTPPQLLERNRHTPIFDFTFFRELEEFRRARRRQGS PHYTYLGF
GQDLSAGRPKEKTLILVKLEPWCKAYLEGVQREGVSSLDSSSLGLCLSSSTNSLYEDIEHFLMDLG
QWP (SEQ ID NO: 14)

>Murine IRF7/IRF3 5(D) protein (pI=4.72, MW = 58456)

MAEVRGVQRVLFQDWLLGEVSSGQYEGQLQWLNEARTVFRVPWKHFGRRLDDEEDAQIFKAWAV
ARGRWPPSGVNLPPPEAAEAERRRRGWKTNFRCALHSTGRFILRQDNSGDPVDPHKVYELSRE
LGSTVGPATENREEVSLSNALPTQGVSPGSFLARENAGLQTPSPLLSSDAGDLLQVLQYSHILES
ESGADPVPPQAPGQEQDRVYEEPYAAWQVEAVSPSRPQQPALTERSLGFLDVTIKLFDGLILGPLK
DEGSSDLAIVSDPSQQLPSPNVNLFNPAPQENPLKQLLAAEQWEFEVTAIFYRGRQVFQQTLCF
GGLRLVGSTADMTLPWQPVTLDPPEGFLTDKLVKEYVGQVLKGLGNGLALWQAGQCLWAQRLG
HSHAFWALGEELLPDSEGRGPDGEVHKDKDGAVFDLRPFVADLIAFMEGSGHSPRYTLWFCMGEM
WPQDQPWWKRLVMVKVPTCLKELLEMAREGGASSLKTVDLHIDNDQPIDLDDDDQYKAYLQDLVE
DMDFQATGNI (SEQ ID NO: 15)

>Murine IRF8 (UniProt Accession P23611)

MCDRNGGRRRLRQWLIEQIDSSMYPGLIWENDEKTMFRIPWKHAGKQDYNQEVDAIFKAWAVFK
GKFKEGDKAEPATWKTRLCALNKPDPFEEVTDRLSDISEPYKVYRIVPEEEQKCKLGVPAGC
MSEVPEMECGRSEIEELIKEPSVDEYMGMTKRSPSPPEACRSQILPDWWWQQPSAGLPLVTGYAA
YDTHHSFAFSQMVISFYGGKLVGQATTTCLEGCRLSLSQPGLPKLYGPDGLEPVCFTADTIPSER
QRQVTRKLFHGLERGVLLHSNRKGVFVKRLCQGRVFCSGNAVVCGRPNKLERDEVVQVFDTNQ
FIRELQQFYATQSRLPDSRVVLCFGEFPDTPVPLRSKLILVQVEQLYARQLVEEAGKSCGAGSLMP
ALEEPQPDQAFRMPDICTSHQRPFRENQQITV (SEQ ID NO: 16)

FIG. 11 CONT'D

>Murine IRF8 (K310R) protein (pI= 6.38, MW = 48265)

MCDRNGGRRLRQWLIEQIDSSMYPGLIWENDEKTMFRIPWKHAGKQDYNQEVDASIFKAWAVFK
GKFKEGDKAEPATWKTRLRCALNKSPDFEEVTDQRSQLDISEPYKVYRIVPEEEQKCKLGVAAPAGC
MSEVPEMECGRSEIEELIKEPSVDEYMGMTKRSPSPPEACRSQILPDWWWQQPSAGLPLVTGYAA
YDTHHSAFSQMVISFYGGKLVGQATTTTCLEGCRSLSQPGLPKLYGPDGLEPVCFTADTIPSER
QRQVTRKLFGLHLERGVLLHSNRKGVFVKRLCQGRVFCSGNAVVCGRPNRLERDEVVQVFDTNQ
FIRELQQFYATQSRLPDSRVVLCFGEEFPDTPVPLRSKLLVQVEQLYARQLVEEAGKSCGAGSLMP
ALEEPQPDQAFRMFDPDICTSHQRPFFRENQQITV (SEQ ID NO: 17)

>Human IKK β isoform 1 (UniProt Accession O14920-1)

MSWSPSLTTQTCGAWEMKERLGTGGFGNVIRWHNQETGEQIAIKQCRQELSPRNRERWCLEIQI
MRRLTHPNVVAARDVPEGMQNAPNDLPLLAMEYCCGGDLRKLYNQFENCCGLREGAILTLLSDI
ASALRYLHENRIIHRDLKPENIVLQQGEQRLIHKIIDLGYAKELDQGSLSCTSFVGTLLQYLAPELLEQQK
YTVTVDYWSFGTLAFECITGFRPFLPNWQPVQWHSKVRQKSEVDIVVSEDNGTVKFSSSLPYPN
NLNSVLAERLEKWLQMLMWHPRQRGTDPYGPNGCFKALDDILNLKLVHILNMVTGTIHTYPVTE
DESLQSLKARIQQDTGIPEEDQELLQEAGLALIPDKPATQCISDGKLNEGHTLDMDLVFLFDNSKITY
ETQISPRQPESVSCILQEPKRNLAFFQLRKVWGQVWHSIQTLKEDCNRLQQGQRAAMMNLLRNN
SCLSKMKNSMASMSQQLKAKLDFFKTSIQIDLEKYSEQTEFGITSDKLLAWREMEQAVELCGREN
EVKLLVERMMALQTDIVDLQRSPMGRKQGGTLDLEEQAARELYRRLREKPRDQRTEGDSQEMVR
LLLQAIQSFEKKVRVIYTQLSKTVVCKQKALELLPKVEEVVSLMNEDEKTVVRLQEKRQKELWNLLK
IACSKVRGPVSGSPDSMNASRLSQPGQLMSQPSTASNSLPEPAKKSEELVAEAHNLCTLLENAIQD
TVREQDQSFTALDWSWLQTEEEHSCLEQAS (SEQ ID NO: 18)

>Human IKK β isoform 2 (UniProt Accession O14920-2)

MFSGGCHSPGFGRPSAPFAPGSPPPAPRPCRQETGEQIAIKQCRQELSPRNRERWCLEIQIMRR
LTHPNVVAARDVPEGMQNAPNDLPLLAMEYCCGGDLRKLYNQFENCCGLREGAILTLLSDIASAL
RYLHENRIIHRDLKPENIVLQQGEQRLIHKIIDLGYAKELDQGSLSCTSFVGTLLQYLAPELLEQQKYTVT
VDYWSFGTLAFECITGFRPFLPNWQPVQWHSKVRQKSEVDIVVSEDNGTVKFSSSLPYPNLNS
VLAERLEKWLQMLMWHPRQRGTDPYGPNGCFKALDDILNLKLVHILNMVTGTIHTYPVTEDESL
QSLKARIQQDTGIPEEDQELLQEAGLALIPDKPATQCISDGKLNEGHTLDMDLVFLFDNSKITYETQI
SPRPQPESVSCILQEPKRNLAFFQLRKVWGQVWHSIQTLKEDCNRLQQGQRAAMMNLLRNNNSCL
SKMKNSMASMSQQLKAKLDFFKTSIQIDLEKYSEQTEFGITSDKLLAWREMEQAVELCGRENEVK
LLVERMMALQTDIVDLQRSPMGRKQGGTLDLEEQAARELYRRLREKPRDQRTEGDSQEMVRLLL
QAIQSFEKKVRVIYTQLSKTVVCKQKALELLPKVEEVVSLMNEDEKTVVRLQEKRQKELWNLLKIAC
SKVRGPVSGSPDSMNASRLSQPGQLMSQPSTASNSLPEPAKKSEELVAEAHNLCTLLENAIQDTV
REQDQSFTALDWSWLQTEEEHSCLEQAS (SEQ ID NO: 19)

>Human IKK β isoform 3 (UniProt Accession O14920-3)

MSWSPSLTTQTCGAWEMKERLGTGGFGNVIRWHNQETGEQIAIKQCRQELSPRNRERWCLEIQI
MRRLTHPNVVAARDVPEGMQNAPNDLPLLAMEYCCGGDLRKLYNQFENCCGLREGAILTLLSDI
ASALRYLHENRIIHRDLKPENIVLQQGEQRLIHKIIDLGYAKELDQGSLSCTSFVGTLLQYLAPELLEQQK
YTVTVDYWSFGTLAFECITGFRPFLPNWQPVQCVRMWPGTVAHSCNPSTLGGGRGRWIS (SEQ ID
NO: 20)

FIG. 11 CONT.

>Human IKK β isoform 4 (UniProt Accession O14920-4)

MSSDGTIRLTHPNVVAARDVPEGMQNLAPNDLPLAMEYCQGGDLRKYLNQFENCCGLREGAILT
LLSDIASALRYLHENRIHRDLKPENIVLQQGEQRLIHKIIDLGYAKELDQGSLSCTSFVGTQLQYLAPELL
EQQKYTVTVDYWSFGTLAFECITGFRPFLPNWQPQVQVHVKVRQKSEVDIVVSEDNLNGTVKFSSSL
PYPNNLSVLAERLEKWLQLMLMWHPRQRGTDPYGPNGCFKALDDILNLKLVHILNMVTGTIHTY
PVTEDESLQSLKARIQQDTGIPEEDQELLQEAGLALIPDKPATQCISDGKLNIGHTLDMDLVFLFDN
SKITYETQISPRPQPESVSCILQEPKRNLAFFQLRKVWGQVWHSIQTLKEDCNRLQQGQRAAMMN
LLRNNSCLSKMKNSMASMSQQLKAKLDFFKTSIQIDLEKYSEQTEFGITSDKLLAWREMEQAVEL
CGRENEVKLLVERMMALQTDIVDLQRSPMGRKQGGTLDLEEQAARELYRRLREKPRDQRTEGDS
QEMVRLLLQAIQSFEKKVRVIYTQLSKTVVCKQKALELLPKVEEVVSLMNEDEKTVVRLQEKQRKEL
WNLLKIACSKVRGPVSGSPDSMNASRLSQPGQLMSQPSTASNSLPEPAKKSEELVAEAHNLCTLL
ENAIQDTVREQDQSFTALDWSWLQTEEEEHSCLEQAS (SEQ ID NO: 21)

>Murine IKK β protein (pI=6.20, MW=84387.61, GenBank Accession no. NP_034676.1)

MSWSPSLPTQTCGAWEMKERLGTGGFGNVIRWHNQATGEQIAIKQCRQELSPKNRDRWCLEIQI
MRRLNHPNVVAARDVPEGMQNLAPNDLPLAMEYCQGGDLRRYLNQFENCCGLREGAVLTLLSD
IASALRYLHENRIHRDLKPENIVLQQGEKRLIHKIIDLGYAKELDQGSLSCTSFVGTQLQYLAPELLEQQ
KYTVTVDYWSFGTLAFECITGFRPFLPNWQPQVQVHVKVRQKSEVDIVVSEDNLGAVKFSSSLPFP
NNLSVLAERLEKWLQLMLMWHPRQRGTDPQYGPNGCFRALDDILNLKLVHVLNMVTGTVHTYP
VTEDESLQSLKTRIQEDTGILETDQELLQEAGLVLLPDKPATQCISDSKTNEGLTLDMDLVFLFDNSK
INYETQITPRPQPESVSCILQEPKRNLSFFQLRKVWGQVWHSIQTLKEDCNRLQQGQRAAMMSLL
RNNSCLSKMKNAMASTAQQQLKAKLDFFKTSIQIDLEKYKEQTEFGITSDKLLAWREMEQAVEQCG
RENDVKHLVERMMALQTDIVDLQRSPMGRKQGGTLDLEEQAARELYRRLREKPRDQRTEGDSQE
MVRLLLQAIQSFEKKVRVIYTQLSKTVVCKQKALELLPKVEEVVSLMNEDERTVVRLQEKQRKELW
NLLKIACSKVRGPVSGSPDSMNVSRLSHPGQLMSQPSSACDSLPESDKKSEELVAEAHALCSRLE
SALQDTVKEQDRSFTVTA (SEQ ID NO: 22)

FIG. 11 CONT.

>Human IRF5 isoform 1 cds

ATGAACCAGTCCATCCCAGTGGCTCCACCCCCACCCCGCCGCGTGCGGGCTGAAGCCCTGGCT
GGTGGCCCAGGTGAACAGCTGCCAGTACCCAGGGCTTCAATGGGTCAACGGGGAAAAAGAAAT
TATTCTGCATCCCCTGGAGGCATGCCACAAGGCATGGTCCCAGCCAGGACGGAGATAACACC
ATCTTCAAGGCCTGGGCCAAGGAGACAGGGAAATACACCGAAGGCGTGATGAAGCCGATCC
GGCCAAGTGGAAGGCCAACCTGCGCTGTGCCCTTAACAAGAGCCGGGACTTCCGCCTCATCT
ACGACGGGGCCCCGGGACATGCCACCTCAGCCCTACAAGATCTACGAGGTCTGCTCCAATGGC
CCTGCTCCCACAGACTCCCAGCCCCCTGAGGATTACTCTTTTGGTGCAGGAGAGGAGGAGGA
AGAAGAGGAAGAGCTGCAGAGGATGTTGCCAAGCCTGAGCCTCACAGAGGATGTCAAGTGGC
CGCCCCACTCTGCAGCCGCCACTCTGCGGCCGCCTACTCTGCAGCCGCCACTCTGCAGCCG
CCCGTGGTGCTGGGTCCCCCTGCTCCAGACCCCAGCCCCCTGGCTCCTCCCCCTGGCAACCC
TGCTGGCTTCAGGGAGCTTCTCTCTGAGGTCCTGGAGCCTGGGCCCTGCCTGCCAGCCTGC
CCCCTGCAGGCGAACAGCTCCTGCCAGACCTGCTGATCAGCCCCACATGCTGCCTCTGACC
GACCTGGAGATCAAGTTTCAGTACCGGGGGCGGCCACCCCGGGCCCTCACCATCAGCAACCC
CCATGGCTGCCGGCTCTTCTACAGCCAGCTGGAGGCCACCCAGGAGCAGGTGGAACCTTTCG
GCCCCATAAGCCTGGAGCAAGTGCGCTTCCCCAGCCCTGAGGACATCCCCAGTGACAAGCAG
CGCTTCTACACGAACCAGCTGCTGGATGTCCTGGACCGCGGGCTCATCCTCCAGCTACAGGG
CCAGGACCTTTATGCCATCCGCCTGTGTCAGTGCAAGGTGTTCTGGAGCGGGCCTTGTGCCT
CAGCCCATGACTCATGCCCCAACCCCATCCAGCGGGAGGTCAAGACCAAGCTTTTCAGCCTG
GAGCATTTTCTCAATGAGCTCATCCTGTTCCAAAAGGGCCAGACCAACACCCACACCCTTC
GAGATCTTCTTCTGCTTTGGGGAAGAATGGCCTGACCGCAAACCCCGAGAGAAGAAGCTCATT
ACTGTACAGGTGGTGCCTGTAGCAGCTCGACTGCTGCTGGAGATGTTCTCAGGGGAGCTATCT
TGGTCAGCTGATAGTATCCGGCTACAGATCTCAAACCCAGACCTCAAAGACCGCATGGTGGAG
CAATTCAAGGAGCTCCATCACATCTGGCAGTCCCAGCAGCGGTTGCAGCCTGTGGCCCAGGC
CCCTCCTGGAGCAGGCCTTGGTGTGGCCAGGGGCCCTGGCCTATGCACCCAGCTGGCATG
CAATAA (SEQ ID NO: 23)

FIG. 11 CONT.

>Human IRF5 isoform 2 cds

ATGAACCAGTCCATCCCAGTGGCTCCACCCCCACCCCGCCGCGTGCGGGCTGAAGCCCTGGCT
GGTGGCCCAGGTGAACAGCTGCCAGTACCCAGGGCTTCAATGGGTCAACGGGGAAAAAGAAAT
TATTCTGCATCCCCTGGAGGCATGCCACAAGGCATGGTCCCAGCCAGGACGGAGATAACACC
ATCTTCAAGGCCTGGGCCAAGGAGACAGGGAAATACACCGAAGGCGTGATGAAGCCGATCC
GGCCAAGTGGAAGGCCAACCTGCGCTGTGCCCTTAACAAGAGCCGGGACTTCCGCCTCATCT
ACGACGGGGCCCCGGGACATGCCACCTCAGCCCTACAAGATCTACGAGGTCTGCTCCAATGGC
CCTGCTCCCACAGACTCCCAGCCCCCTGAGGATTACTCTTTTGGTGCAGGAGAGGAGGAGGA
AGAAGAGGAAGAGCTGCAGAGGATGTTGCCAAGCCTGAGCCTCACAGATGCAGTGCAGTCTG
GCCCCACATGACACCCTATTCTTTACTCAAAGAGGATGTCAAGTGGCCGCCCACTCTGCAGC
CGCCCCACTCTGCGGCCGCCTACTCTGCAGCCGCCCACTCTGCAGCCGCCCGTGGTGCTGGG
TCCCCCTGCTCCAGACCCCAGCCCCCTGGCTCCTCCCCCTGGCAACCCTGCTGGCTTCAGGG
AGCTTCTCTCTGAGGTCCTGGAGCCTGGGCCCCCTGCCTGCCAGCCTGCCCCCTGCAGGCGAA
CAGCTCCTGCCAGACCTGCTGATCAGCCCCACATGCTGCCTCTGACCGACCTGGAGATCAA
GTTTCAGTACCGGGGGCGGCCACCCCGGGCCCTCACCATCAGCAACCCCATGGCTGCCGG
CTCTTCTACAGCCAGCTGGAGGCCACCCAGGAGCAGGTGGAACCTTTCGGCCCCATAAGCCT
GGAGCAAGTGCGCTTCCCCAGCCCTGAGGACATCCCCAGTGACAAGCAGCGCTTCTACACGA
ACCAGCTGCTGGATGTCCTGGACCGCGGGCTCATCTCCAGCTACAGGGCCAGGACCTTTAT
GCCATCCGCCTGTGTCAAGGTGTTCTGGAGCGGGCCTTGTGCCTCAGCCCATGACTC
ATGCCCCAACCCCATCCAGCGGGAGGTCAAGACCAAGCTTTTCAGCCTGGAGCATTTTCTCAA
TGAGCTCATCCTGTTCCAAAAGGGCCAGACCAACACCCACACCCTTCGAGATCTTCTTCTG
CTTTGGGGAAGAATGGCCTGACCGCAAAACCCGAGAGAAGAAGCTCATTACTGTACAGGTGG
TGCCTGTAGCAGCTCGACTGCTGCTGGAGATGTTCTCAGGGGAGCTATCTTGGTCAGCTGATA
GTATCCGGCTACAGATCTCAAACCCAGACCTCAAAGACCGCATGGTGGAGCAATTCAAGGAG
CTCCATCACATCTGGCAGTCCCAGCAGCGTTGCAGCCTGTGGCCCAGGCCCTCCTGGAGC
AGGCCTTGGTGTTGGCCAGGGGCCCTGGCCTATGCACCCAGCTGGCATGCAATAA (SEQ ID
NO: 24)

FIG. 11 CONT.

>Human IRF5 isoform 3 cds (GenBank Accession U51127)

ATGAACCAGTCCATCCCAGTGGCTCCACCCCCACCCCGCCGCGTGCGGGCTGAAGCCCTGGCT
GGTGGCCCAGGTGAACAGCTGCCAGTACCCAGGGCTTCAATGGGTCAACGGGGAAAAAGAAAT
TATTCTGCATCCCCTGGAGGCATGCCACAAGGCATGGTCCCAGCCAGGACGGAGATAACACC
ATCTTCAAGGCCTGGGCCAAGGAGACAGGGAAATACACCGAAGGCGTGGATGAAGCCGATCC
GGCCAAGGGAAGGCCAACCTGCGCTGTGCCCTTAACAAGAGCCGGGACTTCCGCCTCATCTA
CGACGGGGCCCCGGGACATGCCACCTCAGCCCTACAAGATCTACGAGGTCTGCTCCAATGGCC
CTGCTCCCACAGACTCCCAGCCCCCTGAGGATTACTCTTTTGGTGCAGGAGAGGAGAGGAA
GAAGAGGAAGAGCTGCAGAGGATGTTGCCAAGCCTGAGCCTCACAGATGCAGTGCAGTCTGG
CCCCACATGACACCCTATTCTTTACTCAAAGAGGATGTCAAGTGGCCGCCCACTCTGCAGCC
GCCCCACTCTGCAGCCGCCCGTGGTGTGGGTCCCCCTGCTCCAGACCCCAGCCCCCTGGCT
CCTCCCCCTGGCAACCCTGCTGGCTTCAGGGAGCTTCTCTCTGAGGTCTTGAGCCTGGGCC
CCTGCCTGCCAGCCTGCCCCCTGCAGGCGAACAGCTCCTGCCAGACCTGCTGATCAGCCCCC
ACATGCTGCCTCTGACCGACCTGGAGATCAAGTTTCAGTACCGGGGGCGGCCACCCCGGGCC
CTCACCATCAGCAACCCCCATGGCTGCCGGCTCTTCTACAGCCAGCTGGAGGCCACCCAGGA
GCAGGTGGAACCTTTCGGCCCCATAAGCCTGGAGCAAGTGCGCTTCCCCAGCCCTGAGGACA
TCCCCAGTGACAAGCAGCGCTTCTACACGAACCAGCTGCTGGATGTCCTGGACCGCGGGCTC
ATCCTCCAGCTACAGGGCCAGGACCTTTATGCCATCCGCCTGTGTCAAGGTGTTCTGG
AGCGGGCCTTGTGCCTCAGCCCATGACTCATGCCCCAACCCCATCCAGCGGGAGGTCAAGAC
CAAGCTTTTTCAGCCTGGAGCATTTTCTCAATGAGCTCATCCTGTTCCAAAAGGGCCAGACCAAC
ACCCACCAACCCTTCGAGATCTTCTTCTGCTTTGGGGAAGAATGGCCTGACCGCAAACCCCGA
GAGAAGAAGCTCATTACTGTACAGGTGGTGCCTGTAGCAGCTCGACTGCTGCTGGAGATGTTT
TCAGGGGAGCTATCTTGGTCAGCTGATAGTATCCGGCTACAGATCTCAAACCCAGACCTCAAA
GACCGCATGGTGGAGCAATTCAAGGAGCTCCATCACATCTGGCAGTCCCAGCAGCGGTTGCA
GCCTGTGGCCAGGCCCTCCTGGAGCAGGCCTTGGTGTGGCCAGGGGCCCTGGCCTATG
CACCCAGCTGGCATGCAATAA (SEQ ID NO: 25)

FIG. 11 CONT.

>Human IRF5 isoform 4 cds (GenBank Accession nos. AY504946 or AY504947)

ATGAACCAAGTCCATCCCAGTGGCTCCACCCCAACCCGCGCGTGC GGCTGAAGCCCTGGCT
GGTGGCCCAGGTGAACAGCTGCCAGTACCCAGGGCTTCAATGGGTCAACGGGGAAAAAGAAAT
TATTCTGCATCCCCTGGAGGCATGCCACAAGGCATGGTCCCAGCCAGGACGGAGATAACACC
ATCTTCAAGGCCTGGGCCAAGGAGACAGGGAAATACACCGAAGGCGTGGATGAAGCCGATCC
GGCCAAGTGAAGGCCAACCTGCGCTGTGCCCTTAACAAGAGCCGGGACTTCCGCCTCATCT
ACGACGGGGCCCCGGGACATGCCACCTCAGCCCTACAAGATCTACGAGGTCTGCTCCAATGGC
CCTGCTCCCACAGACTCCCAGCCCCCTGAGGATTACTCTTTTGGTGCAGGAGAGGAGGAGGA
AGAAGAGGAAGAGCTGCAGAGGATGTTGCCAAGCCTGAGCCTCACAGAGGATGTCAAGTGGC
CGCCCACTCTGCAGCCGCCCACTCTGCAGCCGCCCGTGGTGTGGTGGTCCCCCTGCTCCAGA
CCCCAGCCCCCTGGCTCCTCCCCCTGGCAACCTGCTGGCTTCAGGGAGCTTCTCTCTGAGG
TCCTGGAGCCTGGGCCCTGCCTGCCAGCCTGCCCCCTGCAGGCGAACAGCTCCTGCCAGA
CCTGCTGATCAGCCCCCACATGCTGCCTCTGACCGACCTGGAGATCAAGTTTCAGTACCGGG
GGCGGCCACCCGGGCCCTCACCATCAGCAACCCCATGGCTGCCGGCTCTTCTACAGCCA
GCTGGAGGCCACCCAGGAGCAGGTGGAACCTCTCGGCCCCATAAGCCTGGAGCAAGTGC GC
TTCCCCAGCCCTGAGGACATCCCAGTGACAAGCAGCGCTTCTACACGAACCAGCTGCTGGA
TGTCTGGACCGCGGGCTCATCCTCCAGCTACAGGGCCAGGACCTTTATGCCATCCGCCTGT
GTCAGTGCAAGGTGTTCTGGAGCGGGCCTTGTGCCTCAGCCCATGACTCATGCCCCAACCCC
ATCCAGCGGGAGGTCAAGACCAAGCTTTTCAGCCTGGAGCATTTTCTCAATGAGCTCATCCTG
TTCCAAAAGGGCCAGACCAACACCCACCCACCTTCGAGATCTTCTTCTGCTTTGGGGAAGAA
TGGCCTGACCGCAAACCCCGAGAGAAGAAGCTCATTACTGTACAGGTGGTGCCTGTAGCAGC
TCGACTGCTGCTGGAGATGTTCTCAGGGGAGCTATCTTGGTCAGCTGATAGTATCCGGCTACA
GATCTCAAACCCAGACCTCAAAGACCGCATGGTGGAGCAATTCAAGGAGCTCCATCACATCTG
GCAGTCCCAGCAGCGTTGCAGCCTGTGGCCAGGCCCTCCTGGAGCAGGCCTTGGTGT
GGCCAGGGGCCCTGGCCTATGCACCCAGCTGGCATGCAATAA (SEQ ID NO: 26)

>Human IRF5 isoform 5 cds

ATGAACCAAGTCCATCCCAGTGGCTCCACCCCAACCCGCGCGTGC GGCTGAAGCCCTGGCT
GGTGGCCCAGGTGAACAGCTGCCAGTACCCAGGGCTTCAATGGGTCAACGGGGAAAAAGAAAT
TATTCTGCATCCCCTGGAGGCATGCCACAAGGCATGGTCCCAGCCAGGACGGAGATAACACC
ATCTTCAAGGCCTGGGCCAAGGAGACAGGGAAATACACCGAAGGCGTGGATGAAGCCGATCC
GGCCAAGTGAAGGCCAACCTGCGCTGTGCCCTTAACAAGAGCCGGGACTTCCGCCTCATCT
ACGACGGGGCCCCGGGACATGCCACCTCAGCCCTACAAGATCTACGAGGTCTGCTCCAATGGC
CCTGCTCCCACAGACTCCCAGCCCCCTGAGGATTACTCTTTTGGTGCAGGAGAGGAGGAGGA
AGAAGAGGAAGAGCTGCAGAGGATGTTGCCAAGCCTGAGCCTCACAGTGACCGACCTGGAGA
TCAAGTTTCAGTACCGGGGGCGGCCACCCCGGGCCCTCACCATCAGCAACCCCATGGCTGC
CGGCTCTTCTACAGCCAGCTGGAGGCCACCCAGGAGCAGGTGGAACCTTTCGGCCCCATAAG
CCTGGAGCAAGTGCCTTCCCCAGCCCTGAGGACATCCCAGTGACAAGCAGCGCTTCTACA
CGAACCAGCTGCTGGATGTCCTGGACCGCGGGCTCATCCTCCAGCTACAGGGCCAGGACCTT
TATGCCATCCGCCTGTGTCAAGGTGTTCTGGAGCGGGCCTTGTGCCTCAGCCCATGA
CTCATGCCCCAACCCCATCCAGCGGGAGGTCAAGACCAAGCTTTTCAGCCTGGAGCATTTTCT
CAATGAGCTCATCCTGTTCCAAAAGGGCCAGACCAACACCCACCCACCTTCGAGATCTTCTT
CTGCTTTGGGGAAGAATGGCCTGACCGCAAACCCCGAGAGAAGAAGCTCATTACTGTACAGG
TGGTGCCTGTAGCAGCTCGACTGCTGCTGGAGATGTTCTCAGGGGAGCTATCTTGGTCAGCT
GATAGTATCCGGCTACAGATCTCAAACCCAGACCTCAAAGACCGCATGGTGGAGCAATTCAAG
GAGCTCCATCACATCTGGCAGTCCCAGCAGCGGTTGCAGCCTGTGGCCAGGCCCTCCTGG
AGCAGGCCTTGGTGTGGCCAGGGGCCCTGGCCTATGCACCCAGCTGGCATGCAATAA (SEQ
ID NO: 27)

FIG. 11 CONT.

>Human IRF5 isoform 6 cds

ATGAACCAAGTCCATCCCAGTGGCTCCACCCCAACCCGCCGCGTGCGGCTGAAGCCCTGGCT
GGTGGCCCAGGTGAACAGCTGCCAGTACCCAGGGCTTCAATGGGTCAACGGGGAAAAAGAAAT
TATTCTGCATCCCCTGGAGGCATGCCACAAGGCATGGTCCCAGCCAGGACGGAGATAACACC
ATCTTCAAGGCCTGGGCCAAGGAGACAGGGAAATACACCGAAGGCGTGGATGAAGCCGATCC
GGCCAAGTGAAGGCCAACCTGCGCTGTGCCCTTAACAAGAGCCGGGACTTCCGCCTCATCT
ACGACGGGGCCCCGGGACATGCCACCTCAGCCCTACAAGATCTACGAGACTCCCAGCCCCCTG
AGGATTACTCTTTTGGTGCAGGAGAGGAGGAGGAAGAAGAGGAAGAGCTGCAGAGGATGTTG
CCAAGCCTGA (SEQ ID NO: 28)

>Murine IRF5 cds (1494nt)

ATGAATCATAGTGCACCCGGGATCCCTCCTCCTCCAAGACGAGTACGCCTCAAGCCCTGGTTG
GTAGCTCAAGTCAACTCATGCCAATACCCTGGGCTTCAAGTGGGTGAACGGTGAGAAGAAATTG
TTTTATATCCCATGGCGACACGCAACAAGACATGGCCCATCACAGGATGGAGATAACACCATA
TTTAAGGCATGGGCAAAGGAAACAGGAAAGTACACTGAGGGCGTTGATGAGGGCCGATCCTGC
AAAATGGAAAGCAAATTTGCGATGCGCTCTCAATAAATCACGAGATTTCCAACCTCTTTTACGAC
GGCCCAAGGGACATGCCACCACAACCTTATAAAATCTACGAGGTATGTTCCAACGGTCCAGCC
CCAACCTGAATCCCAGCCTACTGACGACTATGTCCTTGGAGAAGAGGAGGAAGAAGAAGAGGA
GGAACCTTCAGCGGATGTTGCCTGGGTTGTCCATAACTGAGCCTGCCTTGCCAGGACCCCCTAA
TGCACCATACTCCCTTCCCAAAGAAGATACAAAATGGCCCCCGCATTGCAACCCCCCGTTGG
TTTGGGACCACCTGTGCCCGACCCAAATCTCTTGGCCCCACCAAGCGGTAACCCAGCCGGAT
TTCGACAACCTTCTGCCCGAAGTCCTTGAGCCAGGTCCCTTGGCCTCTTCTCAGCCCCCTACAG
AACCTCTGCTCCCCGATCTCTTGATATCTCCCCACATGCTTCCCTTGACTGATTTGGAGATAA
AATTTCAAGTATCGCGGCCGAGCTCCCAGAACACTGACTATATCAAATCCCCAAGGTTGCCGCC
TGTTTTACAGTCAGTTGGAGGCAACTCAGGAGCAAGTAGAGCTCTTTGGGCCAGTTACTCTGG
AGCAGGTGAGATTCCCTAGTCCAGAGGACATACCAAGCGATAAGCAAAGATTTTACACAAATC
AACTTCTGGATGTACTTGATCGAGGTTTGATCCTTCAGTTGCAGGGCCAAGATTTGTATGCCAT
TCGACTCTGTCAATGCAAGGTATTTTGGAGCGGCCCATGTGCCCTTGCTCATGGCAGCTGCCC
TAATCCCATCCAAAGAGAGAAAGTAAAGACTAAACTTTTTCAGCCTGGAACAATTTCTCAACGAATC
ATTCTGTTTCAAAAAGGTCAGACCAACACACCCCCCTCCTTTCGAGATTTTCTTCTGCTTCGGCG
AAGAGTGGCCTGATGTGAAGCCCCGCGAAAAAAGCTTATCACCGTTCAAGTGGTACCCGTG
CAGCCAGGCTCCTTCTTGAATGTTTAGCGGTGAACCTCTCATGGTCCGCTGACAGTATCCGGC
TCCAAATATCAAACCCTGATCTTAAAGACCACATGGTAGAACAGTTTAAAGAACTCCACCACC
TGTGGCAATCCCAACAGCAGCTCCAGCCAATGGTTCAAGCTCCTCCAGTCGCTGGGCTGGAC
GCCTCACAAGGACCCTGGCCCATGCACCCCGTCGGGATGCAGTAA (SEQ ID NO: 29)

FIG. 11 CONT.

>Human IRF1 cds

ATGCCCATCACTCGGATGCGCATGAGACCCTGGCTAGAGATGCAGATTAATTCCAACCAAATC
CCGGGGGCTCATCTGGATTAATAAAGAGGAGATGATCTTCCAGATCCCATGGAAGCATGCTGCC
AAGCATGGCTGGGACATCAACAAGGATGCCTGTTTGTTCGGAGCTGGGCCATTACACAGG
CCGATACAAAGCAGGGGAAAAGGAGCCAGATCCCAAGACGTGGAAGGCCAACTTTCGCTGTG
CCATGAACTCCCTGCCAGATATCGAGGAGGTGAAAGACCAGAGCAGGAACAAGGGCAGCTCA
GCTGTGCGAGTGTACCGGATGCTTCCACCTCTCACCAAGAACCAGAGAAAAAGAAAGAAAGTCG
AAGTCCAGCCGAGATGCTAAGAGCAAGGCCAAGAGGAAGTCATGTGGGGATTCCAGCCCTGA
TACCTTCTCTGATGGACTCAGCAGCTCCACTCTGCCTGATGACCACAGCAGCTACACAGTTCC
AGGCTACATGCAGGACTTGGAGGTGGAGCAGGCCCTGACTCCAGCACTGTCGCCATGTGCTG
TCAGCAGCACTCTCCCCGACTGGCACATCCCAGTGGAAGTTGTGCCGGACAGCACCAGTGAT
CTGTACAACTTCCAGGTGTCACCCATGCCCTCCACCTCTGAAGCTACAACAGATGAGGATGAG
GAAGGGAAATTACCTGAGGACATCATGAAGCTCTTGGAGCAGTCGGAGTGGCAGCCAACAAA
CGTGGATGGGAAGGGGTACCTACTCAATGAACCTGGAGTCCAGCCCACCTCTGTCTATGGAG
ACTTTAGCTGTAAGGAGGAGCCAGAAATTGACAGCCCAGGGGGGGATATTGGGCTGAGTCTA
CAGCGTGTCTTACAGATCTGAAGAACATGGATGCCACCTGGCTGGACAGCCTGCTGACCCC
AGTCCGGTTGCCCTCCATCCAGGCCATTCCC
TGTGCACCGTAG (SEQ ID NO: 30)

FIG. 11 CONT.

>Human IRF3 isoform 1 cds (NM_001571.5)

ATGGGAACCCCAAAGCCACGGATCCTGCCCTGGCTGGTGTGCGAGCTGGACCTGGGGCAACT
GGAGGGCGTGGCCTGGGTGAACAAGAGCCGCACGCGCTTCCGCATCCCTTGGAAGCACGGC
CTACGGCAGGATGCACAGCAGGAGGATTTCTGAATCTTCCAGGCCTGGGCCGAGGCCACTGG
TGCATATGTTCCCGGGAGGGATAAGCCAGACCTGCCAACCTGGAAGAGGAATTTCCGCTCTG
CCCTCAACCGCAAAGAAGGGTTGCGTTTAGCAGAGGACCGGAGCAAGGACCCCTCACGACCCA
CATAAAATCTACGAGTTTGTGAACCTCAGGAGTTGGGGACTTTTCCCAGCCAGACACCTCTCCG
GACACCAATGGTGGAGGCAGTACTTCTGATACCCAGGAAGACATTCTGGATGAGTTACTGGGT
AACATGGTGTTGGCCCCACTCCCAGATCCGGGACCCCCAAGCCTGGCTGTAGCCCCTGAGCC
CTGCCCTCAGCCCCTGCGGAGCCCCAGCTTGGACAATCCCCTCCCTTCCCAAACCTGGGGC
CCTCTGAGAACCCACTGAAGCGGCTGTTGGTGCCGGGGGAAGAGTGGGAGTTCGAGGTGAC
AGCCTTCTACCGGGGCCGCCAAGTCTTCCAGCAGACCATCTCCTGCCCGGAGGGCCTGCGG
CTGGTGGGGTCCGAAGTGGGAGACAGGACGCTGCCTGGATGGCCAGTCACACTGCCAGACC
CTGGCATGTCCCTGACAGACAGGGGAGTGATGAGCTACGTGAGGCATGTGCTGAGCTGCCTG
GGTGGGGGACTGGCTCTCTGGCGGGCCGGGCACTGGCTCTGGGCCAGCGGCTGGGGCAC
TGCCACACATACTGGGCAGTGAGCGAGGAGCTGCTCCCCAACAGCGGGCATGGGCCTGATG
GCGAGGTCCCCAAGGACAAGGAAGGAGGCGTGTGTTGACCTGGGGCCCTTCATTGTAGATCTG
ATTACCTTCACGGAAGGAAGCGGACGCTCACCACGCTATGCCCTCTGGTTCTGTGTGGGGGA
GTCATGGCCCCAGGACCAGCCGTGGACCAAGAGGCTCGTGATGGTCAAGGTTGTGCCACGT
GCCTCAGGGCCTTGGTAGAAATGGCCCGGGTAGGGGGTGCCTCCTCCCTGGAGAATACTGTG
GACCTGCACATTTCCAACAGCCACCCACTCTCCCTCACCTCCGACCAGTACAAGGCCTACCTG
CAGGACTTGGTGGAGGGCATGGATTTCCAGGGCCCTGGGGAGAGCTGA (SEQ ID NO: 31)

>Human IRF7 isoform A cds (NM_001572.3)

ATGGCCTTGGCTCCTGAGAGGGCAGCCCCACGCGTGCTGTTCCGAGAGTGGCTCCTTGGAGA
GATCAGCAGCGGCTGCTATGAGGGGCTGCAGTGGCTGGACGAGGCCCGCACCTGTTTCCGC
GTGCCCTGGAAGCACTTCGCGCGCAAGGACCTGAGCGAGGCCGACGCGCGCATCTCAAGG
CCTGGCTGTGGCCCGCGGCGAGGTGGCCGCTAGCAGCAGGGGAGGTGGCCCGCCCCCG
AGGCTGAGACTGCGGAGCGCGCGGCTGGAAAACCAACTTCCGCTGCGCACTGCGCAGCAC
GCGTCGCTTCGTGATGCTGCGGGATAACTCGGGGGACCCGGCCGACCCGCACAAGGTGTAC
GCGCTCAGCCGGGAGCTGTGCTGGCGAGAAGGCCAGGCACGGACCAGACTGAGGCAGAG
GCCCCCGCAGCTGTCCCACCACACAGGGTGGGCCCCCAGGGCCATTCTGGCACACACAC
ATGCTGGACTCCAAGCCCCAGGCCCCCTCCCTGCCCCAGCTGGTGACAAGGGGGACCTCCT
GCTCCAGGCAGTGCAACAGAGCTGCCTGGCAGACCATCTGCTGACAGCGTCATGGGGGGCA
GATCCAGTCCCAACCAAGGCTCCTGGAGAGGGACAAGAAGGGCTTCCCCTGACTGGGGCCTG
TGCTGGAGGGCCAGGGCTCCCTGCTGGGGAGCTGTACGGGTGGGCAGTAGAGACGACCCCC
AGCCCCGGGCCCCAGCCCGCGGCACTAACGACAGGCGAGGCCGCGGCCCCAGAGTCCCCG
CACCAGGCAGAGCCGTACCTGTCAACCTCCCCAAGCGCCTGCACCGCGGTGCAAGAGCCCA
GCCCAGGGGCGCTGGACGTGACCATCATGTACAAGGGCCGCACGGTGTGCGAAGGTGGT
GGGACACCCGAGCTGCACGTTCTATACGGCCCCCAGACCCAGCTGTCCGGGCCACAGAC
CCCCAGCAGGTAGCATTTCCCAGCCCTGCCGAGCTCCCGGACCAGGAAGCAGCTGCGCTACA
CGGAGGAAGTGTGCGGCACGTGGCCCTGGGTTGCACCTGGAGCTTCGGGGGCCACAGCT
GTGGGCCCCGGCGCATGGGCAAGTGCAAGGTGTACTGGGAGGTGGGCGGACCCCCAGGCTCC
GCCAGCCCCTCCACCCCAGCCTGCCTGCTGCCTCGGAACTGTGACACCCCCATCTTCGACTT
CAGAGTCTTCTTCCAAGAGCTGGTGGAATTCGGGGCACGGCAGCGCCGTGGCTCCCCACGCT
ATACCATCTACCTGGGCTTCGGGCAGGACCTGTGAGCTGGGAGGCCCAAGGAGAAGAGCCTG
GTCCTGGTGAAGCTGGAACCCTGGCTGTGCCGAGTGACCTAGAGGGCACGCAGCGTGAGG
GTGTGTCTTCCCTGGATAGCAGCAGCCTCAGCCTCTGCCTGTCCAGCGCCAACAGCCTCTAT
GACGACATCGAGTGCTTCCTTATGGAGCTGGAGCAGCCCGCCTAG (SEQ ID NO: 32)

FIG. 11 CONT.

>Human IRF8 cds

ATGTGTGACCGGAATGGTGGTCGGCGGGCTTCGACAGTGGCTGATCGAGCAGATTGACAGTAG
CATGTATCCAGGACTGATTTGGGAGAATGAGGAGAAGAGCATGTTCCGGATCCCTTGGAACA
CGCTGGCAAGCAAGATTATAATCAGGAAGTGGATGCCTCCATTTTAAAGCCTGGGCAGTTTT
TAAAGGGAAGTTTAAAGAAGGGGACAAAGCTGAACCAGCCACTTGGAAGACGAGGTTACGCT
GTGCTTTGAATAAGAGCCCAGATTTTGAGGAAGTGACGGACCGGTCCCAACTGGACATTTCCG
AGCCATACAAAGTTTACCGAATTGTTCTGAGGAAGAGCAAAAATGCAAACTAGGCGTGGCAA
CTGCTGGCTGCGTGAATGAAGTTACAGAGATGGAGTGCGGTCGCTCTGAAATCGACGAGCTG
ATCAAGGAGCCTTCTGTGGACGATTACATGGGGATGATCAAAAGGAGCCCTTCCCCGCCGGA
GGCCTGTCCGAGTCAGCTCCTTCCAGACTGGTGGGCGCAGCAGCCCAGCACAGGCGTGCCG
CTGGTGACGGGGTACACCACCTACGACGCGCACCATTACGATTCTCCAGATGGTGATCAG
CTTCTACTATGGGGGCAAGCTGGTGGGCCAGGCCACCACCACCTGCCCCGAGGGCTGCCGC
CTGTCCCTGAGCCAGCCTGGGCTGCCCGGCCACCAAGCTGTATGGGCCGAGGGCCTGGAGC
TGGTGCGCTTCCCGCCGGCCGACGCCATCCCCAGCGAGCGACAGAGGCAGGTGACGCGGAA
GCTGTTTCGGGCACCTGGAGCGCGGGGTGCTGCTGCACAGCAGCCGGCAGGGCGTGTTTCGTC
AAGCGGCTGTGCCAGGGCCGCGTGTTCTGCAGCGGCAACGCCGTGGTGTGCAAAGGCAGGC
CCAACAAGCTGGAGCGTGATGAGGTGGTCCAGGTCTTCGACACCAGCCAGTTCTTCCGAGAG
CTGCAGCAGTTCTATAACAGCCAGGGCCGGCTTCTGACGGCAGGGTGGTGCTGTGCTTTGG
GGAAGAGTTTCCGGATATGGCCCCCTTGCCTCCAACTCATTCTCGTGACAGATTGAGCAGCT
GTATGTCCGGCAACTGGCAGAAGAGGCTGGGAAGAGCTGTGGAGCCGGCTCTGTGATGCAG
GCCCCCGAGGAGCCGCCGCCAGACCAGGTCTTCCGGATGTTTCCAGATATTTGTGCCTCACA
CCAGAGATCATTTTTTCAGAGAAAACCAACAGATCACCGTCTAA (SEQ ID NO: 33)

>Murine IRF1 cds (NM_001159396.1)

ATGCCAATCACTCGAATGCGGATGAGACCCTGGCTAGAGATGCAGATTAATTCCAACCAAATC
CCAGGGCTGATCTGGATCAATAAAGAAGAGATGATCTTCCAGATTCCATGGAAGCACGCTGCT
AAGCACGGCTGGGACATCAACAAGGATGCCTGTCTGTTCCGGAGCTGGGCCATTACACAGG
CCGATACAAAGCAGGAGAGAAAAAGAGCCAGATCCCAAGACATGGAAGGCCAACTTCCGTTGTG
CCATGAACTCCCTGCCAGACATCGAGGAAGTGAAGGATCAGAGTAGGAACAAGGGCAGCTCT
GCTGTGCGGGTGTACCGGATGCTGCCACCCCTCACCAGGAACCAGAGGAAAGAGAGAAAGTC
CAAGTCCAGCCGAGACACTAAGAGCAAAACCAAGAGGAAGCTGTGTGGAGATGTTAGCCCGG
ACACTTTCTCTGATGGACTCAGCAGCTCTACCCTACCTGATGACCACAGCAGTTACACCACTC
AGGGCTACCTGGGTGAGGACTTGGATATGGAAGGGACATAACTCCAGCACTGTCAACCGTGT
GTCGTCAGCAGCAGTCTCTCTGAGTGGCATATGCAGATGGACATTATACCAGATAGCACCCT
GATCTGTATAACCTACAGGTGTCACCCATGCCTTCCACCTCCGAAGCCGCAACAGACGAGGAT
GAGGAAGGGGAAGATAGCCGAAGACCTTATGAAGCTCTTTGAACAGTCTGAGTGGCAGCCGAC
ACACATCGATGGCAAGGGATACTTGCTCAATGAGCCAGGGACCCAGCTCTTCTGTCTATGG
AGACTTCAGCTGCAAGAGGAACCAGAGATTGACAGCCCTCGAGGGGACATTGGGATAGGCA
TACAACATGTCTTCACGGAGATGAAGAATATGGACTCCATCATGTGGATGGACAGCCTGCTGG
GCAACTCTGTGAGGCTGCCGCCCTCTATTACAGGCCATTCTTGTGCACCATAG (SEQ ID NO:
34)

FIG. 11 CONT.

>Murine IRF3 cds (NM_016849.4)

ATGGAAACCCCGAAAACCGCGGATTTTGCCTGGCTGGTGTACAGCTGGACCTGGGGCAGCT
GGAAGGCGTGGCCTGGCTGGACGAGAGCCGAACGAGGTTCAAGATCCCCTGGAAGCATGGC
CTACGGCAGGACGCACAGATGGCTGACTTTGGCATCTTCCAGGCCTGGGCAGAAGCCAGTGG
TGCCTACACCCCGGGGAAGGATAAGCCGGACGTGTCAACCTGGAAGAGGAATTTCCGGTCAG
CCCTGAACCGGAAAAGAAGTGTTGCGGTTAGCTGCTGACAATAGCAAGGACCCTTATGACCCTC
ATAAAGTGTATGAGTTTGTGACTCCAGGGGCGCGGGACTTCGTACATCTGGGTGCCTCTCCTG
ACACCAATGGCAAAAGCAGCCTGCCTCACTCCCAGGAAAACCTACCGAAGTTATTTGATGGCC
TGATCTTGGGGCCCCCTCAAAGATGAGGGGTCTCAGATCTGGCTATTGTTTCTGATCCTTCTC
AACAACTGCCAAGCCCCAATGTGAACAACCTTCTAAACCCCTGCACCCCAAGAAAATCCACTGA
AGCAGCTGCTAGCTGAGGAACAATGGGAGTTCGAGGTGACCGCCTTCTACCGAGGCCGCCAG
GTCTTCCAGCAGACACTCTTTTGGCCGGGGGGCCTGCGGCTGGTGGGCAGCACAGCTGACAT
GACACTGCCCTGGCAGCCAGTCAACCTGCCGATCCTGAGGGGTTTCTGACGGACAAGCTTG
TGAAGGAGTACGTGGGGCAGGTGCTCAAAGGGCTGGGCAATGGGCTGGCACTGTGGCAGGC
TGGGCAGTGCCTCTGGGCCCAGCGCCTAGGCCACTCCACGCCTTCTGGGCTCTGGGGGAG
GAGCTGCTTCCAGACAGTGGGCGAGGGCCTGATGGAGAGGTCCACAAGGACAAGGACGGAG
CCGTGTTTCGACCTCAGGCCCTTCGTGGCAGATCTGATTGCCTTCATGGAAGGAAGTGGACACT
CCCCACGCTACACTCTGTGGTTCTGCATGGGGGAAATGTGGCCCCAGGACCAGCCATGGGTC
AAGAGGCTTGTGATGGTCAAGGTTGTTCTACATGTCTTAAGGAGCTGTTAGAGATGGCCCGG
GAAGGGGGAGCCTCTTCACTGAAAACCGTGGACTTGACATCTCCAACAGCCAGCCTATCTCC
CTTACCTCTGACCAGTACAAGGCCTACCTCCAGGACTTGGTGGAGGACATGGAATTCCAGGC
CACTGGAAATATCTGA (SEQ ID NO: 35)

>Murine IRF7 cds (NM_016850.3)

ATGGCTGAAGTGAGGGGGGTCCAGCGAGTGCTGTTTGGAGACTGGCTATTGGGGGAGGTCA
GCAGCGGCCAGTACGAGGGGCTGCAGTGGCTGAACGAGGCTCGCACAGTCTTCCGCGTACC
CTGGAAGCATTTTCGGTCGTAGGGATCTGGATGAAGAAGATGCACAGATCTTCAAGGCCTGGG
CTGTGGCCCCGAGGGAGGTGGCCACCTAGTGGAGTTAACCTGCCACCCCAAGGCTGGG
TGCTGAGCGAAGAGAGCGAAGAGGCTGGAAGACCAACTTCCGCTGTGCACTCCACAGCACAG
GGCGTTTTATCTTGCGCCAAGACAATTCAAGGGATCCAGTTGATCCGCATAAGGTGTACGAAC
TTAGCCGGGAGCTTGGATCTACTGTGGGCCCAGCCACGGAAAAATAGGGAAGAAGTGAACCTC
AGCAATGCTCTGCCACACAGGGTGTGTCCCCAGGATCATTTCTGGCAAGAGAAAAATGCTGGG
CTCCAAACCCCAAGCCCTCTGCTTTCTAGTGATGCCGGGGACCTCTTGCTTCAGGTTCTGCAG
TACAGCCACATACTGGAATCCGAGTCTGGGGCAGACCCCGTCCACCCACAGGCTCCTGGCCA
GGAGCAAGACCGTGTTTACGAGGAACCCTATGCAGCATGGCAGGTGGAAGCTGTCCCCAGTC
CCAGGCCTCAACAGCCAGCTCTACCGAGCGCAGCCTTGGGTTCTTGATGTGACCATCATG
TACAAGGGCCGCGACAGTGCTACAGGCAGTGGTGGGGCACCCAGATGCGTGTTCTGTACAG
CCCCATGGCCCCAGCAGTAAGAACTTCAGAGCCCCAGCCGGTGATCTTCCAGTCTCTGCTG
AGCTCCCAGATCAGAAGCAGCTGCACTACACAGAGACGCTTCTCCAGCATGTGTCTCCCGGC
CTTCAGCTGGAGCTTCGAGGACCGTCACTGTGGGCCCTGCGTATGGGCAAGTGCAAGGTGTA
CTGGGAGGTAGGCAGCCCTATGGGCACTACCGGCCCTCCACCCCAAGCTGCTGGAG
CGCAACCGCCACACCCCATCTTCGACTTCAGCACTTTCTTCCGAGAACTGGAGGAGTTTCGG
GCTCGGAGGCGGCAAGGGTCACCACACTACACCATCTACCTGGGTTTTGGGCAAGACTTGTC
AGCAGGGAGGCCCAAGGAGAAGACCCTGATCCTGGTGAAGCTGGAGCCATGGGTATGCAAG
GCATACCTGGAGGGCGTGACGCTGAGGGTGTGTCTCCCTGGACAGCAGCAGTCTCGGCTT
GTGCTTGTCTAGCACCAACAGTCTCTACGAAGACATCGAACACTTCTCATGGACCTGGGTCA
GTGGCCTTGA (SEQ ID NO: 36)

FIG. 11 CONT.

>Murine IRF-7/IRF-3 5(D) cds (1578 nt)

ATGGCCGAAGTTCGAGGAGTACAGCGCGTGCTGTTTGGGGACTGGTTGCTTGGTGAAGTCTC
TTCTGGTCAGTATGAAGGCCTGCAATGGCTTAATGAGGCACGCACAGTTTTTCGAGTGCCATG
GAAACACTTCGGTAGGCGCGATCTCGACGAAGAGGATGCCAGATTTTCAAGGCATGGGCAG
TCGCACGGGGCAGGTGGCCCCCTCAGGCGTAAATTTGCCCCCCCCAGAGGCTGAAGCTGCT
GAACGCAGAGAACGCCGGGGATGGAAGACTAACTTTTCGATGTGCCCTTCACAGTACAGGCAG
GTTTCATCTTGCGGCAGGATAATAGTGGCGACCCTGTAGACCCACACAAGGTTTATGAGCTGAG
CCGGGAGCTTGGCTCAACAGTCCGTCCTGCAACCGAGAACAGAGAAAGAGGTGTCCTTGTCTA
ACGCCCTCCCAACTCAGGGTGTGTCTCCCGGTAGCTTCTCCTGGCACGCGAAAACGCTGGACTC
CAAACCCCCTCCCCACTGTTGTCCAGTGATGCCGGTGATCTTCTCCTTCAGGTGCTCCAATAC
TCCCATATACTGGAGAGCGAGTCAGGGGCTGATCCCGTGCCCCCTCAAGCTCCTGGACAGGA
ACAAGATCGCGTCTACGAGGAGCCATATGCTGCCTGGCAGGTCGAGGCTGTGCCATCACCTC
GGCCTCAACAGCCCGCTCTCACCGAGCGCTCACTTGGGTTTTTGGATGTCACTAAACTTTTTCG
ACGGCCTGATACTTGGCCATTGAAGGACGAGGGATCATCCGATCTTGCCATAGTAAGTGACC
CATCACAGCAGTTGCCCTCACCAAACGTCAACAACCTTCTCAATCCAGCTCCCCAGGAGAACC
CCCTCAAACAGCTTCTCGCAGAAGAGCAATGGGAGTTTGAGGTGACTGCTTTCTATAGAGGTA
GGCAGGTGTTCCAACAACTCTGTTTTGCCCGGAGGTCTGCGCCTTGAGGTAGCACCGCA
GACATGACACTTCCCTGGCAACCTGTGACACTTCCCGATCCTGAGGGATTTCTCACAGATAAA
CTCGTTAAGGAATATGTGGGGCAAGTACTCAAAGGTCTGGGCAATGGGTTGGCCCTTTGGCAA
GCTGGTCAATGTCTCTGGGCTCAACGACTCGGGCACTCACATGCTTTTTGGGCTCTTGGCGAG
GAGCTGCTCCCCGACAGCGGGCGCGGACCTGACGGGGAGGTTTCATAAGGACAAAGACGGCG
CCGTATTTGATCTTAGACCTTTCGTGGCAGATCTGATCGCTTTCATGGAAGGATCAGGTCATAG
CCCCAGGTACACACTTTGGTTTTGCATGGGTGAAATGTGGCCTCAGGACCAACCTTGGGTCAA
GCGCTTGGTCATGGTTAAGGTGGTTCCCACTTGCCTCAAAGAGTTGTTGGAGATGGCTAGGGA
AGGTGGGGCTTCTCACTGAAAACCGTAGATCTCCACATTGATAATGATCAGCCTATAGATTT
GGACGACGACCAATACAAAGCTTATCTCCAGGACCTGTTGAAGATATGGACTTTCAGGCTAC
AGGTAACATCTAA (SEQ ID NO: 37)

FIG. 11 CONT.

>Murine IRF8 cds (SEQ ID NO: 38)

ATGTGTGACAGGAACGGCGGTAGAAAGACTGAGACAGTGGCTGATCGAGCAAATTGACAGCTC
AATGTACCCTGGGTTGATATGGGAAAACGATGAAAAGACAATGTTTCAGAATACCCTGGAAGCA
CGCTGGAAGCAGGATTACAACCAGGAAGTGGACGCCAGTATTTTAAAGGCTTGGGCTGTCTT
CAAAGGGAAGTTTAAAGAGGGCGACAAAGCAGAGCCAGCAACCTGGAAAACCCGCTTGAGGT
GTGCACTCAATAAGTCACCCGACTTCGAGGAAGTCACTGACCGCAGTCAATTGGACATATCAG
AACCATACAAAAGTCTACAGGATAGTCCCCGAAGAAGAGCAGAAATGCAAACCTCGGTGTAGCAC
CTGCTGGCTGTATGAGTGAAGTGCCTGAAATGGAATGCGGCAGATCAGAAATCGAAGAACTCA
TAAAAGAACCAAGTGTAGATGAGTATATGGGAATGACCAAAAGATCCCCATCCCCCCCAGAAG
CCTGTCTGGAGCCAAATCTTGCCTGACTGGTGGGTACAGCAACCCTCCGCCGGAAGTCCCTT
GTGACAGGCTATGCCGCTTACGATACTCATCACAGCGCTTTTAGCCAGATGGTTATTTCTTC
TATTATGGAGGAAAAGTGGTCCGCCAAGCCACAACCACCTGCCTCGAGGGGTGTCTGCTTGA
TTTGAGTCAACCCGGTCTTCCCAAACCTCTATGGCCCCGATGGGCTTGAACCTGTCTGCTTTCC
CACTGCTGATACTATTCCCTCAGAGAGACAACGACAAGTCACCCGAAAATTGTTTGGCCACCT
CGAGAGGGGAGTACTCTTGCACTCTAACAGGAAGGGTGTCTTTGTGAAACGCCCTCTGTCAAGG
TAGGGTATTCTGTTCTGGAAATGCAGTTGTTTGCAAAGGCAGGCCTAACAAACTGGAACGGGA
TGAAGTCGTACAAGTGTTTCGATACCAATCAGTTTATTCGGGAGTTGCAGCAGTTTTACGCTACA
CAAAGTCGCCTCCCTGACAGTCGGGTTGTGTTGTGCTTCGGGGAGGAGTTTCCCGACACTGTA
CCCCTCCGAAGCAAACCTCATACTGGTACAGGTAGAACAACCTTTATGCCAGGCAACTGGTGAA
GAGGCCGGTAAGTCCTGTGGCGCAGGATCCCTGATGCCAGCCCTGGAAGAGCCCCAGCCTG
ACCAAGCATTTAGGATGTTTCCCGACATTTGTACCTCACACCAGAGGCCTTTTTTCCGCGAAA
ACCAGCAGATAACCGTGTA (SEQ ID NO: 38)

>Murine IRF8 K310R cds (1275 nt)

ATGTGTGACAGGAACGGCGGTAGAAAGACTGAGACAGTGGCTGATCGAGCAAATTGACAGCTC
AATGTACCCTGGGTTGATATGGGAAAACGATGAAAAGACAATGTTTCAGAATACCCTGGAAGCA
CGCTGGAAGCAGGATTACAACCAGGAAGTGGACGCCAGTATTTTAAAGGCTTGGGCTGTCTT
CAAAGGGAAGTTTAAAGAGGGCGACAAAGCAGAGCCAGCAACCTGGAAAACCCGCTTGAGGT
GTGCACTCAATAAGTCACCCGACTTCGAGGAAGTCACTGACCGCAGTCAATTGGACATATCAG
AACCATACAAAAGTCTACAGGATAGTCCCCGAAGAAGAGCAGAAATGCAAACCTCGGTGTAGCAC
CTGCTGGCTGTATGAGTGAAGTGCCTGAAATGGAATGCGGCAGATCAGAAATCGAAGAACTCA
TAAAAGAACCAAGTGTAGATGAGTATATGGGAATGACCAAAAGATCCCCATCCCCCCCAGAAG
CCTGTCTGGAGCCAAATCTTGCCTGACTGGTGGGTACAGCAACCCTCCGCCGGAAGTCCCTT
GTGACAGGCTATGCCGCTTACGATACTCATCACAGCGCTTTTAGCCAGATGGTTATTTCTTC
TATTATGGAGGAAAAGTGGTCCGCCAAGCCACAACCACCTGCCTCGAGGGGTGTCTGCTTGA
TTTGAGTCAACCCGGTCTTCCCAAACCTCTATGGCCCCGATGGGCTTGAACCTGTCTGCTTTCC
CACTGCTGATACTATTCCCTCAGAGAGACAACGACAAGTCACCCGAAAATTGTTTGGCCACCT
CGAGAGGGGAGTACTCTTGCACTCTAACAGGAAGGGTGTCTTTGTGAAACGCCCTCTGTCAAGG
TAGGGTATTCTGTTCTGGAAATGCAGTTGTTTGCAAAGGCAGGCCTAACAGACTGGAACGGGA
TGAAGTCGTACAAGTGTTTCGATACCAATCAGTTTATTCGGGAGTTGCAGCAGTTTTACGCTACA
CAAAGTCGCCTCCCTGACAGTCGGGTTGTGTTGTGCTTCGGGGAGGAGTTTCCCGACACTGTA
CCCCTCCGAAGCAAACCTCATACTGGTACAGGTAGAACAACCTTTATGCCAGGCAACTGGTGAA
GAGGCCGGTAAGTCCTGTGGCGCAGGATCCCTGATGCCAGCCCTGGAAGAGCCCCAGCCTG
ACCAAGCATTTAGGATGTTTCCCGACATTTGTACCTCACACCAGAGGCCTTTTTTCCGCGAAA
ACCAGCAGATAACCGTGTA (SEQ ID NO: 39)

FIG. 11 CONT.

>Human IKK β isoform 1 cds

ATGAGCTGGTCACCTTCCCTGACAACGCAGACATGTGGGGCCTGGGAAATGAAAGAGCGCCT
TGGGACAGGGGATTTGGAAATGTCATCCGATGGCACAATCAGGAAACAGGTGAGCAGATTG
CCATCAAGCAGTGCCGGCAGGAGCTCAGCCCCCGGAACCGAGAGCGGTGGTGCCTGGAGAT
CCAGATCATGAGAAGGCTGACCCACCCCAATGTGGTGGCTGCCCCGAGATGTCCCTGAGGGGA
TGCAGAACTTGGCGCCCAATGACCTGCCCTGCTGGCCATGGAGTACTGCCAAGGAGGAGAT
CTCCGGAAGTACCTGAACCAGTTTGAGAACTGCTGTGGTCTGCGGGAAGGTGCCATCCTCAC
CTTGCTGAGTGACATTGCCTCTGCGCTTAGATACCTTCATGAAAACAGAATCATCCATCGGGA
TCTAAAGCCAGAAAACATCGTCCTGCAGCAAGGAGAACAGAGGTTAATACACAAAATTATTGAC
CTAGGATATGCCAAGGAGCTGGATCAGGGCAGTCTTTGCACATCATTCTGTGGGGACCTGCA
GTACCTGGCCCCAGAGCTACTGGAGCAGCAGAAGTACACAGTGACCGTCGACTACTGGAGCT
TCGGCACCTTGGCCTTTGAGTGCATCACGGGCTTCCGGCCCTTCTCCCAACTGGCAGCCC
GTGCAGTGGCATTCAAAAGTGCGGCAGAAAGAGTGAGGTGGACATTGTTGTTAGCGAAGACTTG
AATGGAACGGTGAAAGTTTTCAAGCTCTTTACCTACCCCAATAATCTTAACAGTGTCTGGCT
GAGCGATGGAGAAGTGGCTGCAACTGATGCTGATGTGGCACCCCCGACAGAGGGGCACGG
ATCCACGTATGGGCCCAATGGCTGCTTCAAGGCCCTGGATGACATCTTAACTTAAAGCTGG
TTCATATCTTGAACATGGTCACGGGCACCATCCACACCTACCCTGTGACAGAGGATGAGAGTC
TGCAGAGCTTGAAGGCCAGAATCCAACAGGACACGGGCATCCCAGAGGAGGACCAGGAGCT
GCTGCAGGAAGCGGGCCTGGCGTTGATCCCCGATAAGCCTGCCACTCAGTGTATTTTACAGCG
GCAAGTTAAATGAGGGCCACACATTGGACATGGATCTTGTCTTTTCTCTTTGACAACAGTAAAT
CACCTATGAGACTCAGATCTCCCCACGGCCCCAACCTGAAAGTGTGAGCTGTATCCTTCAAGA
GCCCAAGAGGAATCTCGCCTTCTTCCAGCTGAGGAAGGTGTGGGGCCAGGTCTGGCACAGCA
TCCAGACCCTGAAGGAAGATTGCAACCGGCTGCAGCAGGGACAGCGAGCCGCCATGATGAAT
CTCCTCCGAAACAACAGCTGCCTCTCCAAAATGAAGAATTCCATGGCTTCCATGTCTCAGCAG
CTCAAGGCCAAGTTGGATTTCTTCAAAACCAGCATCCAGATTGACCTGGAGAAGTACAGCGAG
CAAACCGAGTTTGGGATCACATCAGATAAACTGCTGCTGGCCTGGAGGGGAAATGGAGCAGGC
TGTGGAGCTCTGTGGGCGGGAGAACGAAGTAACTCCTGGTAGAACGGATGATGGCTCTGC
AGACCGACATTGTGGACTTACAGAGGAGCCCCATGGGCCGGAAGCAGGGGGGAACGCTGGA
CGACCTAGAGGAGCAAGCAAGGGAGCTGTACAGGAGACTAAGGGAAAAACCTCGAGACCAGC
GAACTGAGGGTGACAGTCAGGAAATGGTACGGCTGCTGCTTCAGGCAATTCAGAGCTTCGAG
AAGAAAGTGCGAGTGATCTATACGCAGCTCAGTAAACTGTGGTTTGCAAGCAGAAGGCGCTG
GAACTGTTGCCCAAGGTGGAAGAGGTGGTGAAGTGAATGAATGAGGATGAGAAGACTGTTGTC
CGGCTGCAGGAGAAGCGGCAGAAAGGAGCTCTGGAATCTCCTGAAGATTGCTTGTAGCAAGGT
CCGTGGTCTGTGAGTGAAGCCCGGATAGCATGAATGCCTCTCGACTTAGCCAGCCTGGGC
AGCTGATGTCTCAGCCCTCCACGGCCTCCAACAGCTTACCTGAGCCAGCCAAGAAGAGTGAA
GAACTGGTGGCTGAAGCACATAACCTCTGCACCCTGCTAGAAAATGCCATACAGGACACTGTG
AGGGAACAAGACCAGAGTTTCACGGCCCTAGACTGGAGCTGGTTACAGACGGAAGAAGAAGA
GCACAGCTGCCTGGAGCAGGCCTCATGA (SEQ ID NO: 40)

FIG. 11 CONT.

>Human IKK β isoform 2 cds

ATGTTTTAGGGGGTGTATAGCCCCGGGTTTGGCCGCCCCAGCCCCGCCTTCCCCGCCCC
GGGGAGCCCGCCCCCTGCCCCGCGTCCCTGCCGACAGGAAACAGGTGAGCAGATTGCCATC
AAGCAGTGCCGGCAGGAGCTCAGCCCCCGGAACCGAGAGCGGTGGTGCCTGGAGATCCAGA
TCATGAGAAGGCTGACCCACCCCAATGTGGTGGCTGCCCGAGATGTCCCTGAGGGGATGCAG
AACTTGGCGCCCAATGACCTGCCCTGCTGGCCATGGAGTACTGCCAAGGAGGAGATCTCCG
GAAGTACCTGAACCAAGTTTGAGAACTGCTGTGGTCTGCGGGAAGGTGCCATCCTCACCTTGCT
GAGTGACATTGCCTCTGCGCTTAGATACCTTCATGAAAACAGAATCATCCATCGGGATCTAAA
GCCAGAAAACATCGTCCTGCAGCAAGGAGAACAGAGGTTAATACACAAAATTATTGACCTAGG
ATATGCCAAGGAGCTGGATCAGGGCAGTCTTTCACATCATTCTGTTGGGGACCCCTGCAGTACCT
GGCCCCAGAGCTACTGGAGCAGCAGAAGTACACAGTGACCGTCGACTACTGGAGCTTCGGCA
CCCTGGCCTTTGAGTGCATCACGGGCTTCCGGCCCTTCCCTCCCCAACTGGCAGCCCGTGCAG
TGGCATTCAAAAGTGCAGCAGAAGAGTGAGGTGGACATTGTTGTTAGCGAAGACTTGAATGGA
ACGGTGAAGTTTTCAAGCTCTTTACCTACCCCAATAATCTTAACAGTGTCTGGCTGAGCGA
CTGGAGAAGTGGCTGCAACTGATGCTGATGTGGCACCCCCGACAGAGGGGCACGGATCCCAC
GTATGGGCCCAATGGCTGCTTCAAGGCCCTGGATGACATCTTAACTTAAAGCTGGTTCATATC
TTGAACATGGTCACGGGCACCATCCACACCTACCCTGTGACAGAGGATGAGAGTCTGCAGA
GCTTGAAGGCCAGAATCCAACAGGACACGGGCATCCCAGAGGAGGACCAGGAGCTGCTGCA
GGAAGCGGGCCTGGCGTTGATCCCCGATAAGCCTGCCACTCAGTGTATTTAGACGGCAAGT
TAAATGAGGGCCACACATTGGACATGGATCTTGTCTTTTCTCTTTGACAACAGTAAAATCACCT
ATGAGACTCAGATCTCCCCACGGCCCAACCTGAAAGTGTGAGCTGTATCCTTCAAGAGCCCA
AGAGGAATCTCGCCTTCTTCCAGCTGAGGAAGGTGTGGGGCCAGGTCTGGCACAGCATCCAG
ACCCTGAAGGAAGATTGCAACCGGCTGCAGCAGGGACAGCGAGCCGCCATGATGAATCTCCT
CCGAAACAACAGCTGCCTCTCCAAAATGAAGAATTCATGGCTTCCATGTCTCAGCAGCTCAA
GGCCAAGTTGGATTTCTTCAAACACAGCATCCAGATTGACCTGGAGAAGTACAGCGAGCAAAC
CGAGTTTGGGATCACATCAGATAAACTGCTGCTGGCCTGGAGGGAAATGGAGCAGGCTGTGG
AGCTCTGTGGGCGGGGAGAACGAAGTGAACTCCTGGTAGAACGGATGATGGCTCTGCAGACC
GACATTGTGGACTTACAGAGGAGCCCCATGGGCCGGAAGCAGGGGGGAACGCTGGACGACC
TAGAGGAGCAAGCAAGGGAGCTGTACAGGAGACTAAGGGAAAAACCTCGAGACCAGCGAACT
GAGGGTGACAGTCAGGAAATGGTACGGCTGCTGCTTCAGGCAATTCAGAGCTTCGAGAAGAA
AGTGCGAGTGATCTATACGCAGCTCAGTAAACTGTGGTTTGCAAGCAGAAGGCGCTGGAAC
GTTGCCCAAGGTGGAAGAGGTGGTGAGCTTAATGAATGAGGATGAGAAGACTGTTGTCCGGC
TGCAGGAGAAGCGGCAGAAAGGAGCTCTGGAATCTCCTGAAGATTGCTTGTAGCAAGGTCCGT
GGTCTGTGAGTGAAGCCCGGATAGCATGAATGCCTCTCGACTTAGCCAGCCTGGGCAGCT
GATGTCTCAGCCCTCCACGGCCTCCAACAGCTTACCTGAGCCAGCCAAGAAGAGTGAAGAAGT
GGTGGCTGAAGCACATAACCTCTGCACCCTGCTAGAAAATGCCATACAGGACACTGTGAGGG
AACAAGACCAGAGTTTACGGCCCTAGACTGGAGCTGGTTACAGACGGAAGAAGAAGAGCAC
AGCTGCCTGGAGCAGGCCTCATGA (SEQ ID NO: 41)

FIG. 11 CONT.

>Human IKK β isoform cds

ATGAGCTGGTCACCTTCCCTGACAACGCAGACATGTGGGGCCTGGGAAATGAAAGAGCGCCT
TGGGACAGGGGATTTGGAAATGTCATCCGATGGCACAATCAGGAAACAGGTGAGCAGATTG
CCATCAAGCAGTGCCGGCAGGAGCTCAGCCCCCGGAACCGAGAGCGGTGGTGCCTGGAGAT
CCAGATCATGAGAAGGCTGACCCACCCCAATGTGGTGGCTGCCCGAGATGTCCCTGAGGGGA
TGCAGAACTTGGCGCCCAATGACCTGCCCTGCTGGCCATGGAGTACTGCCAAGGAGGAGAT
CTCCGGAAGTACCTGAACCAGTTTGAGAACTGCTGTGGTCTGCGGGAAGGTGCCATCCTCAC
CTTGCTGAGTGACATTGCCTCTGCGCTTAGATACCTTCATGAAAACAGAATCATCCATCGGGA
TCTAAAGCCAGAAAACATCGTCCTGCAGCAAGGAGAACAGAGGTTAATACACAAAATTATTGAC
CTAGGATATGCCAAGGAGCTGGATCAGGGCAGTCTTTGCACATCATTCTGTTGGGGACCTGCA
GTACCTGGCCCCAGAGCTACTGGAGCAGCAGAAGTACACAGTGACCGTCGACTACTGGAGCT
TCGGCACCTTGGCCTTTGAGTGCATCACGGGCTTCCGGCCCTTCTCCCAACTGGCAGCCC
GTGCAGTGCGTAAGAATGTGGCCGGGTACAGTGGCTCACTCCTGTAATCCCAGCACTTTGGG
AGGCCGAGGCAGGTGGATCAGTTGA (SEQ ID NO: 42)

>Human IKK β isoform 4 cds

ATGTCATCCGATGGCACAATCAGGCTGACCCACCCCAATGTGGTGGCTGCCCGAGATGTCCC
TGAGGGGATGCAGAACTTGGCGCCCAATGACCTGCCCTGCTGGCCATGGAGTACTGCCAAG
GAGGAGATCTCCGGAAGTACCTGAACCAGTTTGAGAACTGCTGTGGTCTGCGGGAAGGTGCC
ATCCTCACCTTGCTGAGTGACATTGCCTCTGCGCTTAGATACCTTCATGAAAACAGAATCATC
CATCGGGATCTAAAGCCAGAAAACATCGTCCTGCAGCAAGGAGAACAGAGGTTAATACACAAA
ATTATTGACCTAGGATATGCCAAGGAGCTGGATCAGGGCAGTCTTTGCACATCATTCTGTTGGG
ACCCTGCAGTACCTGGCCCCAGAGCTACTGGAGCAGCAGAAAGTACACAGTGACCGTCGACTA
CTGGAGCTTCCGGCACCTTGGCCTTTGAGTGCATCACGGGCTTCCGGCCCTTCTCCCAACT
GGCAGCCCGTGCAGTGGCATTCAAAAGTGCGGCAGAAGAGTGAGGTGGACATTGTTGTTAGC
GAAGACTTGAATGGAACGGTGAAGTTTTCAAGCTCTTTACCCTACCCCAATAATCTTAACAGTG
TCCTGGCTGAGCGACTGGAGAAGTGGCTGCAACTGATGCTGATGTGGCACCCCCGACAGAGG
GGCAGGATCCCACGTATGGGCCCAATGGCTGCTTCAAGGCCCTGGATGACATCTTAAACTTA
AAGCTGTTTCATATCTTGAACATGGTCACGGGCACCATCCACACCTACCCTGTGACAGAGGAT
GAGAGTCTGCAGAGCTTGAAGGCCAGAATCCAACAGGACACGGGCATCCCAGAGGAGGACCA
GGAGCTGCTGCAGGAAGCGGGCCTGGCGTTGATCCCCGATAAGCCTGCCACTCAGTGTATTT
CAGACGGCAAGTTAAATGAGGGCCACACATTGGACATGGATCTTGTCTTTCTCTTTGACAACAG
TAAATCACCTATGAGACTCAGATCTCCCCACGGCCCCAACCTGAAAGTGTGAGCTGTATCCTT
CAAGAGCCCAAGAGGAATCTCGCCTTCTTCCAGCTGAGGAAGGTGTGGGGCCAGGTCTGGCA
CAGCATCCAGACCTGAAGGAAGATTGCAACCGGCTGCAGCAGGGACAGCGAGCCGCCATGA
TGAATCTCCTCCGAAACAACAGCTGCCTCTCCAAAATGAAGAATTCCATGGCTTCCATGTCTCA
GCAGCTCAAGGCCAAGTTGGATTTCTTCAAAACCAGCATCCAGATTGACCTGGAGAAGTACAG
CGAGCAAACCGAGTTTGGGATCACATCAGATAAACTGCTGCTGGCCTGGAGGGAAATGGAGC
AGGCTGTGGAGCTCTGTGGGCGGGAGAACGAAGTGAACTCCTGGTAGAACGGATGATGGCT
CTGCAGACCGACATTGTGGACTTACAGAGGAGCCCCATGGGCCGGAAGCAGGGGGGAACGC
TGGACGACCTAGAGGAGCAAGCAAGGGAGCTGTACAGGAGACTAAGGGAAAAACCTCGAGAC
CAGCGAACTAGAGGTGACAGTCAGGAAATGGTACGGCTGCTGCTTCAGGCAATTCAGAGCTT
CGAGAAGAAAGTGCGAGTGATCTATACGCAGCTCAGTAAAAGTGTGGTTTGCAAGCAGAAGGC
GCTGGAAGTGTGCCCCAAGGTGGAAGAGGTGGTGAAGCTTAATGAATGAGGATGAGAAGACTG
TTGTCCGGCTGCAGGAGAAGCGGCAGAAGGAGCTCTGGAATCTCCTGAAGATTGCTTGTAGC
AAGGTCCGTGGTCTGTGAGTGAAGCCCGGATAGCATGAATGCCTCTCGACTTAGCCAGCC
TGGGCAGCTGATGTCTCAGCCCTCCACGGCCTCCAACAGCTTACCTGAGCCAGCCAAGAAGA
GTGAAGAACTGGTGGCTGAAGCACATAACCTCTGCACCCTGCTAGAAAATGCCATACAGGACA
CTGTGAGGGAACAAGACCAGAGTTTACGGCCCTAGACTGGAGCTGGTTACAGACGGAAGAA
GAAGAGCACAGCTGCCTGGAGCAGGCCTCATGA (SEQ ID NO: 43)

FIG. 11 CONT.

>Human IKK β isoform 4 cds

ATGTCATCCGATGGCACAATCAGGCTGACCCACCCCAATGTGGTGGCTGCCCCGAGATGTCCC
TGAGGGGATGCAGAACTTGGCGCCCAATGACCTGCCCTGCTGGCCATGGAGTACTGCCAAG
GAGGAGATCTCCGGAAGTACCTGAACCAAGTTTGAGAACTGCTGTGGTCTGCGGGAAGGTGCC
ATCCTCACCTTGCTGAGTGACATTGCCTCTGCGCTTAGATACCTTCATGAAAACAGAATCATC
CATCGGGATCTAAAGCCAGAAAACATCGTCCTGCAGCAAGGAGAACAGAGGTTAATACACAAA
ATTATTGACCTAGGATATGCCAAGGAGCTGGATCAGGGCAGTCTTTGCACATCATTTCGTGGGG
ACCCTGCAGTACCTGGCCCCAGAGCTACTGGAGCAGCAGAAGTACACAGTGACCGTTCGACTA
CTGGAGCTTCGGCACCTGGCCTTTGAGTGCATCACGGGCTTCGGGCCCTTCTCCCAACT
GGCAGCCCGTGCAGTGGCATTCAAAAGTGCAGCAGAAGAGTGAGGTGGACATTGTTGTTAGC
GAAGACTTGAATGGAACGGTGAAGTTTTCAAGCTCTTTACCCTACCCCAATAATCTTAACAGTG
TCCTGGCTGAGCGACTGGAGAAGTGGCTGCAACTGATGCTGATGTGGCACCCCCGACAGAGG
GGCAGCGATCCCACGTATGGGCCCAATGGCTGCTTCAAGGCCCTGGATGACATCTTAACTTA
AAGCTGGTTCATATCTTGAACATGGTCACGGGCACCATCCACACCTACCCTGTGACAGAGGAT
GAGAGTCTGCAGAGCTTGAAGGCCAGAATCCAACAGGACACGGGCATCCCAGAGGAGGACCA
GGAGCTGCTGCAGGAAGCGGGCCTGGCGTTGATCCCCGATAAGCCTGCCACTCAGTGATTTT
CAGACGGCAAGTTAAATGAGGGCCACACATTGGACATGGATCTTGTCTTTCTCTTTGACAACAG
TAAATCACCTATGAGACTCAGATCTCCCCACGGCCCCAACCTGAAAGTGTCAGCTGTATCCTT
CAAGAGCCCAAGAGGAATCTCGCCTTCTTCCAGCTGAGGAAGGTGTGGGGCCAGGTCTGGCA
CAGCATCCAGACCCTGAAGGAAGATTGCAACCGGCTGCAGCAGGGACAGCGAGCCGCCATGA
TGAATCTCCTCCGAAACAACAGCTGCCTCTCCAAAATGAAGAATTCCATGGCTTCCATGTCTCA
GCAGCTCAAGGCCAAGTTGGATTTCTTCAAAACCAGCATCCAGATTGACCTGGAGAAGTACAG
CGAGCAAACCGAGTTTGGGATCACATCAGATAAACTGCTGCTGGCCTGGAGGGAAATGGAGC
AGGCTGTGGAGCTCTGTGGGCGGGAGAACGAAGTGAACTCCTGGTAGAACGGATGATGGCT
CTGCAGACCGACATTGTGGACTTACAGAGGAGCCCCATGGGCCGGAAGCAGGGGGGAACGC
TGGACGACCTAGAGGAGCAAGCAAGGGAGCTGTACAGGAGACTAAGGGAAAAACCTCGAGAC
CAGCGAACTGAGGGTGACAGTCAGGAAATGGTACGGCTGCTGCTTCAGGCAATTCAGAGCTT
CGAGAAGAAAGTGCGAGTGATCTATACGCAGCTCAGTAAACTGTGGTTTGCAAGCAGAAGGC
GCTGGAAGTGTGCCCCAAGGTGGAAGAGGTGGTGAGCTTAATGAATGAGGATGAGAAGACTG
TTGTCCGGCTGCAGGAGAAGCGGCAGAAAGGAGCTCTGGAATCTCCTGAAGATTGCTTGTAGC
AAGGTCCGTGGTCTGTCAAGTGAAGCCCGGATAGCATGAATGCCTCTCGACTTAGCCAGCC
TGGGCAGCTGATGTCTCAGCCCTCCACGGCCTCCAACAGCTTACCTGAGCCAGCCAAGAAGA
GTGAAGAACTGGTGGCTGAAGCACATAACCTCTGCACCCTGCTAGAAAATGCCATACAGGACA
CTGTGAGGGAACAAGACCAGAGTTTCACGGCCCTAGACTGGAGCTGGTTACAGACGGAAGAA
GAAGAGCACAGCTGCCTGGAGCAGGCCTCATGA (SEQ ID NO: 43)

FIG. 11 CONT.

>Murine IKK β cds (2217 nt)

ATGAGCTGGTCACCGTCCCTCCCAACCCAGACATGTGGAGCCTGGGAAATGAAAGAACGCCT
GGGGACCGGGGGATTTGGAAACGTCATCCGGTGGCACAATCAGGCGACAGGTGAACAGATC
GCCATCAAGCAATGCCGACAGGAGCTCAGCCCAAAGAACAGAGACCGCTGGTGCCTCGAAAT
CCAGATCATGAGAAGGCTGAACCATCCCAATGTGGTGGCTGCCCGGGATGTCCCAGAGGGGA
TGCAGAACCTGGCACCCAATGATTTGCCACTGCTGGCCATGGAGTACTGCCAAGGAGGAGAT
CTCCGAAGATACTTTGAACCAAGTTTCGAGAACTGCTGTGGCCTGCGGGAAGGAGCTGTCCTTACC
CTGCTGAGTGACATCGCATCGGCTCTTAGATACCTTCACGAAAACAGAATCATCCATCGAGAC
CTGAAGCCAGAAAAACATCGTTCTGCAGCAAGGAGAGAAAAAGATTAATACAAAAATTATTGATC
TAGGATATGCCAAGGAGCTGGATCAGGGCAGTCTGTGCACGTCATTTGTGGGGACTCTGCAAT
ACCTGGCGCCAGAGCTTCTGGAGCAGCAGAAGTACACCGTGACCGTTGACTACTGGAGCTTC
GGCACCTGGCCTTCGAGTGCATCACTGGCTTCCGGCCCTTCCTCCCTAACTGGCAGCCTGT
GCAGTGGCACTCCAAAGTCCGGCAGAAGAGCGAAGTGACATCGTTGTTAGTGAAGACTTGA
ATGGAGCAGTGAAGTTTTCAAGTTCGCTACCTTCCCAATAATCTTAACAGTGTCTTGGCTGA
ACGGCTGGAGAAAGTGGCTGCAGCTGATGCTTATGTGGCACCTCGGCAAAGGGGGCACGGATC
CCCAGTATGGCCCCAACGGCTGCTTCAGAGCCCTGGATGACATCTTGAAGTGAAGCTGGTTC
ATGTCTTGAACATGGTCACAGGCACCGTTTCACACATACCCCGTGACGGAGGATGAGAGTCTGC
AGAGCTTAAAAACCAGAATCCAGGAAGACACGGGGATCCTGGAGACAGACCAGGAGCTGCTG
CAAGAGGCAGGGCTGGTGTCTGCTCCCTGACAAGCCTGCTACTCAGTGCATCTCAGACAGCAA
GACAAACGAGGGCCTCACGTTGGACATGGATCTTGTCTTTCTCTTTGACAACAGTAAATCAAC
TATGAGACTCAGATCACCCCCGACCCCAACCGGAAAAGTGTGAGCTGTATCCTTCAGGAGCCC
AAGCGGAACCTCTCCTTCTTCAGCTGAGGAAAGTGTGGGGCCAAGTCTGGCACAGCATCCA
GACGCTGAAGGAAGACTGTAACCGGCTGCAGCAGGGACAGCGAGCAGCCATGATGAGTCTCC
TCCGGAATAACAGCTGCCTCTCTAAGATGAAGAACGCCATGGCCTCCACGGCCCAGCAGCTC
AAGGCCAAGCTGGACTTCTTCAAAACCAGCATCCAGATCGACCTGGAGAAGTATAAAGAGCAG
ACCGAGTTTGGGATCACCTCAGATAAATTGCTGCTGGCTTGGCGGGAGATGGAGCAGGCTGT
GGAGCAGTGTGGGCGGGAGAATGACGTGAAGCATCTAGTAGAGCGGATGATGGCACTGCAGA
CTGACATTGTGGACCTGCAGAGGAGCCCGATGGGTTCGGAAGCAGGGGGGCACCCTGGATGA
CCTAGAGGAACAAGCGAGGGAGCTCTACCGAAGACTCAGGGAGAAGCCAAGAGACCAAAGGA
CAGAAGGTGACAGCCAGGAGATGGTACGGCTGCTGCTTCAGGCAATCCAAAGCTTTGAGAAG
AAAGTTCGGGTGATTTATACACAGCTCAGTAAGACCGTGGTTTGTAAAGCAGAAGGCACTGGAG
TTGCTGCCCAAGGTAGAAGAGGTAGTGAGCCTTATGAACGAGGACGAGAGGACCGTGGTCCG
GCTTCAGGAGAAGCGGCAGAAGGAACTCTGGAACCTCCTGAAGATCGCCTGTAGCAAAGTCC
GAGGTCCCGTGAGTGGAAGCCCAGACAGCATGAATGTGTCTCGACTCAGTCACCCCTGGTCAG
CTAATGTCCCAGCCTTCCAGTGCCTGTGACAGCTTACCTGAATCAGACAAAGAAAAGTGAAGAA
CTGGTGGCCGAAGCCACGCCCTCTGCTCCCGGCTAGAAAAGTGCCTGCAGGACACTGTGAA
GGAGCAAGACAGAAGCTTCACGGTAACCGCCTGATAA (SEQ ID NO: 44)

FIG. 11 CONT.

>Human glucocorticoid-induced leuzine zipper (GILZ) isoform 1 (UniProt Accession Q99576-1)

MNTEMYQTPMEVAVYQLHNFSISFFSSLLGGDVVSVKLDNSASGASVVAIDNKIEQAMD
LVKNHLMYAVREEVEILKEQIRELVEKNSQLERENTLLKTLASPEQLEKFQSCLSPEEPAP
ESPQVPEAPGGS AV (SEQ ID NO: 110)

>Human glucocorticoid-induced leuzine zipper (GILZ) cds (GenBank Accession no. NM_004089.3)

ATGAACACCGAAATGTATCAGACCCCATGGAGGTGGCGGTCTACCAGCTGCACAATT
TCTCCATCTCCTTCTTCTTCTCTGCTTGGAGGGGATGTGGTTTCCGTAAAGCTGGAC
AACAGTGCCTCCGGAGCCAGCGTGGTGGCCATAGACAACAAGATCGAACAGGCCATG
GATCTGGTGAAGAATCATCTGATGTATGCTGTGAGAGAGGAGGTGGAGATCCTGAAGG
AGCAGATCCGAGAGCTGGTGGAGAAGAACTCCCAGCTAGAGCGTGAGAACACCCTGT
TGAAGACCCTGGCAAGCCCAGAGCAGCTGGAGAAGTTCCAGTCCTGTCTGAGCCCTG
AAGAGCCAGCTCCCGAATCCCCACAAGTGCCCGAGGCCCTGGTGGTTCTGCGGTGT
AA (SEQ ID NO: 111)

FIG. 12

Description	Protein SEQ ID NO	CDS SEQ ID NO	Notes
Human IRF5 isoform 1	1	23	UniProt Accession Q13568-1. The isoform is identical to 'variant 2' or 'isoform b' (GenBank Accession NM032643) or 'variant 6' (GenBank Accession AY693666). Mutations at amino acid residues S156, S158 and/or T160 mimicking phosphorylation localizes the protein to the nucleus.
Human IRF5 isoform 2	2	24	UniProt Accession Q13568-2. The isoform is identical to 'variant 5' (GenBank Accession AY693665). Mutations at amino acid residues T10, S158, S309, S317, S451, and/or S462 renders the protein constitutively active.
Human IRF5 isoform 3	3	25	UniProt Accession Q13568-3. The isoform is identical to 'isoform a' or 'variant 1' (GenBank Accession U51127). Mutations at amino acid residues S156, S158 and/or T160 mimicking phosphorylation localizes the protein to the nucleus.
Human IRF5 isoform 4	4	26	UniProt Accession Q13568-4. The isoform is identical to 'variant 3' or 'variant 4' (GenBank Accession nos. AY504946 or AY504947, respectively). Mutations at amino acid residues S425, S427, S430, and/or S436 mimicking phosphorylation renders the protein constitutively active.
Human IRF5 isoform 5	5	27	UniProt Accession Q13568-5.
Human IRF5 isoform 6	6	28	UniProt Accession Q13568-6.
Murine IRF5	7	29	UniProt Accession P56477.
Human IRF1	8	30	UniProt Accession P10914.
Human IRF3 isoform 1	9	31	UniProt Accession Q14653-1.
Human IRF7 isoform A	10	32	UniProt Accession Q92985-1.
Human IRF8	11	33	UniProt Accession Q02556.
Murine IRF1	12	34	UniProt Accession P15314.
Murine IRF3	13	35	UniProt Accession P70671.
Murine IRF7	14	36	UniProt Accession P70434.

FIG. 12 CONT.

Description	Protein SEQ ID NO	CDS SEQ ID NO	Notes
Murine IRF7/IRF3 5(D)	15	37	Mouse fusion protein with 5 AA residues in the IRF3 association domain changed to D to constitutively activate as described in the present disclosure.
Murine IRF8	16	38	UniProt Accession P23611.
Murine IRF8 K310R	17	39	Mutant mouse IRF8 with mutation that affects SUMO binding and renders IRF8 constitutively active as described in the present disclosure.
Human IKKbeta isoform 1	18	40	UniProt Accession O14920.
Human IKKbeta isoform 2	19	41	UniProt Accession O14920-2.
Human IKKbeta isoform 3	20	42	UniProt Accession O14920-3.
Human IKKbeta isoform 4	21	43	UniProt Accession O14920-4.
Murine IKKbeta	22	44	GenBank Accession no. NP_034676.1
Human glucocorticoid-induced leucine zipper (GILZ) isoform 1	110	111	UniProt Accession Q99576-1.