

Supplementary Data

Sources

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SUPPLEMENTARY TABLE S1. EXPRESSION OF IFNs AND IFN-INDUCED SOLUBLE FACTOR GENES IN THE DISTAL COLON, 3 AND 28 DAYS AFTER AA

No.	Gene	Name of gene product	3-Day post-AA		28-Day post-AA		Role of gene product(s)	Ref
			Fold-change	P value	Fold-change	P value		
1	<i>IFNA1</i>	IFN alpha 1	0.92	0.230	1.15	0.296	Human	Pestka and others (2004)
2	<i>IFNA2</i>	IFN alpha 2	—	—	1.15	0.209	Antiviral	
3	<i>IFNA4</i>	IFN alpha 4	—	—	0.96	0.597	Immunomodulatory	
4	<i>IFNA5</i>	IFN alpha 5	0.90	0.155	1.04	0.615	Antiproliferative	
5	<i>IFNA6</i>	IFN alpha 6	—	—	1.11	0.215	—	
6	<i>IFNA7</i>	IFN alpha 7	0.86	0.116	1.03	0.687	Selectively cytotoxic	
7	<i>IFNA8</i>	IFN alpha 8	—	—	—	—	—	
8	<i>IFNA10</i>	IFN alpha 10	—	—	—	—	—	
9	<i>IFNA13</i>	IFN alpha 13	—	—	1.12	0.173	Pro-apoptotic	
10	<i>IFNA14</i>	IFN alpha 14	—	—	1.13	0.232	MHC class I antigen-stimulating	
11	<i>IFNA16</i>	IFN alpha 16	—	—	—	—	—	
12	<i>IFNA17</i>	IFN alpha 17	—	—	—	—	Antiangiogenic Human IFN- α types - Treatment of viral infections and malignancies.	
13	<i>IFNA3</i>	IFN alpha 3	—	—	—	—	Animal	
14	<i>IFNA9</i>	IFN alpha 9	0.96	0.604	0.93	0.321	Antiviral	
15	<i>IFNA11</i>	IFN alpha 11	—	—	1.06	0.465	Antiproliferative	
16	<i>IFNA12</i>	IFN alpha 12	—	—	0.85	0.079	Cytotoxic, apoptotic	
17	<i>IFNA15</i>	IFN alpha 15	—	—	—	—	—	
18	<i>IFNB1</i>	IFN beta 1	0.92	0.295	0.89	0.218	IFN- β - Treatment of relapsing-remitting multiple sclerosis	
19	<i>IFNE</i>	IFN epsilon	1.04	0.312	1.10	0.280	Human	
20	<i>IFNK</i>	IFN kappa	0.91	0.035*	0.96	0.512	—	
21	<i>IFNW</i>	IFN omega	—	—	—	—	Animal	
22	<i>IFND</i>	IFN delta	—	—	—	—	—	
23	<i>IFNT</i>	IFN theta	—	—	—	—	—	
24	<i>IFNZ</i>	IFN zeta, Limitin	0.83	0.135	1.36 [#]	0.016*	Cell mediated immunity, macrophage activation; antiviral, immunoregulatory and antitumor properties	
25	<i>IFNG</i>	IFN gamma	—	—	1.02	0.758	IFN-induced	
26	<i>IFIT1</i>	IFIT1, IFN-induced protein with tetratricopeptide repeats 1, ISG56	2.60 [#]	0.062	3.55 [#]	0.008*	Virus-induced	Guo and others (2000); Fensterl and Sen (2011)
27	<i>IFIT2</i>	IFIT2, IFN-induced protein with tetratricopeptide repeats 2, ISG54	2.26 [#]	0.065	1.65 [#]	0.007*	Pathogens' molecular pattern-induced Immunomodulatory	
28	<i>IFIT3</i>	IFIT3, IFN-induced protein with tetratricopeptide repeats 3, ISG60	2.13 [#]	0.151	2.32 [#]	0.012*	Impedes cell proliferation Mediate a variety of protein-protein interactions	

(continued)

SUPPLEMENTARY TABLE S1. (CONTINUED)

No.	Gene	Name of gene product	3-Day post-AA		28-Day post-AA		Role of gene product(s)	Ref
			Fold-change	P value	Fold-change	P value		
29	<i>IRF1</i>	IRF1, IFN regulatory factor 1	1.18	0.086	0.90	0.140	Positive IFN regulator, Promotes Th1-cell responses, Controls cell-cycle and apoptosis	Lohoff and Mak (2005); Honda and Taniguchi (2006); Zhao and others (2014)
30	<i>IRF2</i>	IRF2, IFN regulatory factor 2	0.91	0.162	1.11	0.230	Attenuate type I IFN responses, Promotes Th1-cell responses	
31	<i>IRF3</i>	IRF3, IFN regulatory factor 3	1.04	0.632	0.88	0.085	Positive IFN regulator, Promote antibacterial and antiviral innate immunity	
32	<i>IRF4</i>	IRF4, IFN regulatory factor 4	—	—	1.15	0.204	Controls T-cell and B-cell function, Controls Th1 responses	
33	<i>IRF5</i>	IRF5, IFN regulatory factor 5	1.04	0.733	0.93	0.388	Positive IFN regulator, Promotes IFN induction and inflammation	
34	<i>IRF6</i>	IRF6, IFN regulatory factor 6	1.05	0.679	0.98	0.801	—	
35	<i>IRF7</i>	IRF7, IFN regulatory factor 7	1.72 [#]	0.024 [*]	1.42 [#]	0.081	Positive IFN regulator, Promote antiviral innate immunity	
36	<i>IRF8</i>	IRF8, IFN regulatory factor 8	1.04	0.490	0.91	0.173	Promote Th1-cell responses, Dendritic cell and macrophage differentiation	
37	<i>IRF9</i>	IRF9, IFN regulatory factor 9	1.35 [#]	0.079	1.47 [#]	0.037 [*]	Induces IRF2 and IRF7, Mediates IFN effects	Childs and Goodbourn (2003)
38	<i>IRF2BP1</i>	IRF2BP1, IFN regulatory factor 2 binding protein 1	0.91	0.197	0.83	0.026 [*]	Nuclear proteins	
39	<i>IRF2BP2</i>	IRF2BP2, IFN regulatory factor 2 binding protein 2	1.17	0.134	0.84	0.048 [*]	IRF2-dependent transcriptional co-repressors	
40	<i>IFRD1</i>	IFRD1, IFN-related developmental regulator 1	1.21	0.154	0.86	0.084	Interact with the C-terminal repression domain of IRF2	Swietlicki and others (2003)
41	<i>IFRD2</i>	IFRD1, IFN-related developmental regulator 2	0.89	0.043 [*]	0.92	0.388	Transcriptional co-activator/repressors for cellular growth and differentiation during embryogenesis and tissue regeneration	
42	<i>IFIH1</i>	IFIH1, IFN induced with helicase C domain 1	1.19	0.062	1.30 [#]	0.035 [*]	RNA helicase - translation initiation and ribosome assembly	Moura and others (2013)
43	<i>IFI30</i>	IFI30, IFN gamma inducible protein 30	1.01	0.956	0.87	0.044 [*]	Lysosomal thiol reductase enzyme - reduces disulfide bonds during antigen processing	West and Cresswell (2013)
44	<i>IFI47</i>	IFI47, IFN gamma inducible protein 47	2.51 [#]	0.062	1.26	0.058	GTP-binding protein produced in B cells	Gilly and Wall (1992)
45	<i>IFI35</i>	IFI35, IFN-induced protein 35	1.43 [#]	0.005 [*]	1.03	0.708	Leucine zipper protein expressed in fibroblasts, macrophages, and epithelial cells	Bange and others (1994)
46	<i>IFI44</i>	IFI44, IFN-induced protein 44	2.2 [#]	0.108	2.65 [#]	0.000 [*]	Binds intracellular GTP, Impedes cell proliferation	Hallen and others (2007)

Distal colonic gene expression of 46 IFN activity-associated genes was done 3 days and 28 days after AA. At 3 days post-AA: *IRF7* and *IFI35* were significantly upregulated (*); and *IFNK* and *IFRD2* were significantly downregulated (*). At 28 days post-AA: *IFNZ*, *IFIT1*, *IFIT2*, *IFIT3*, *IRF9*, *IFIH1*, and *IFI44* were significantly upregulated (*); and *IRF2BP1*, *IRF2BP2*, and *IFI30* were significantly downregulated (*). *P value < 0.05. #Fold-increase \geq 1.3. AA, Appendicitis and appendectomy group.