TREATMENT GROUP	ANNOTATION GROUP	GENE	FUNCTION	EXPRESSION	DAY 1 TO 4	DAY 4 TO 7	DAY 4 TO 7
CONTROL AND IVERMECTIN GROUPS	**SARS-CoV-2**	**CCL2**	Cytokine involved in immunoregulatory and **inflammatory** processes. Elevated expression of the encoded protein is associated with **SARS-CoV-2.**	**Overexpressed on day 1**	x	x	x
		CTSL	Encoded protein cleaves the S1 subunit of the **SARS-CoV-2** spike protein, which is necessary for entry of the virus into the cell.		x		x
		CXL10	Binding of this protein to CXCR3 results in pleiotropic effects, including stimulation of **monocytes**, **natural killer** and **T-cell** migration. This gene may also be a key regulator of the 'cytokine storm' immune response to **SARS-CoV-2** infection.		x	x	x
		LY6E	The protein plays an important role in **T cell** physiology, immunological regulation and in modulation of infection by **SARS-CoV-2.**			x	x
		SIGLEC1	This gene encodes a member of the **immunoglobulin** superfamily. It is expressed only by a subpopulation of **macrophages**. Plays an important role in viral infections and has been shown to enhance **SARS-CoV-2** infection		x		x
		IFITM3	**Interferon**-induced transmembrane (IFITM) proteins are a family of interferon induced **antiviral proteins**. The protein encoded by this gene **restricts cellular entry** by diverse viral pathogens, such as **Sars-CoV-2**.		x		x
		EIF2AK2	Plays an important role in the innate immune response against multiple **RNA viruses**.			x	x
		IFH1	IFIH1 encodes MDA5 which is an intracellular sensor of **viral RNA** that triggers the innate immune response. MDA5 binds dsRNA oligonucleotides with a modified DExD/H-box helicase core and a C-terminal domain, thus leading to a **proinflammatory** response that includes **interferons**. Coronaviruses (CoVs) can evade the MDA5-dependent **interferon** response, thus impeding the activation of the **innate immune** response to infection.		x	x	x
		IFI44L	Predicted to enable GTP binding activity. Involved in defense **response to virus.**		x	x	x
		MOV10	Involved in defense **response to virus.**				x

CONTROL AND IVERMECTIN GROUPS	**Antimicrobial response**	**MX1**	This gene encodes a protein that participates in the cellular **antiviral response**. The protein is induced by type I and type II **interferons** and antagonizes the replication process of several different **RNA viruses.**		x	x	x
		IRF7	This gene encodes **interferon** regulatory factor 7. Is involved in the transcriptional activation of virus-inducible cellular genes, including **interferon** beta chain genes. The protein plays an important role in the innate immune response against **RNA viruses.**		x	x	x
		TLR7	The protein encoded by this gene is a member of the Toll-like receptor (**TLR**) family which plays a fundamental role in **pathogen recognition** and **activation** of **innate** immunity. TLR7 senses single-stranded RNA oligonucleotides containing guanosine- and uridine-rich sequences from **RNA viruses**, a recognition occuring in the endosomes of plasmacytoid dendritic cells and **B cells.**		x		x
		IFIT1	This gene encodes a protein containing tetratricopeptide repeats that was originally identified as induced upon treatment with **interferon**. The encoded protein may **inhibit viral replication**.		x	x	x
		IFIT3	Involved in negative regulation of **apoptotic** process and **response to virus**.		x	x	x
		IFIT5	Involved in defense **response to virus** and negative regulation of **viral** genome **replication**.				x
		STAT1	In response to **cytokines**, STAT family members are phosphorylated by the receptor associated kinases, and then form dimers that translocate to the cell nucleus where they act as transcription activators. The protein can be activated by **interferon-alpha, interferon-gamma** and **IL6**. Plays an important role in immune **responses to viral** pathogens.				x
		STAT2	In response to **interferon** (IFN), this protein forms a complex with STAT1 and IFN regulatory factor family protein p48 (ISGF3G). The protein mediates innate **antiviral activity.**				x
		PLSCR1	This gene encodes a phospholipid scramblase family member. The cell membrane disruption plays an important role in **macrophage** clearing of **apoptotic** cells. The encoded protein has		x	x	x

			additionally been implicated in gene regulation and **interferon**-induced **antiviral responses.**				
		MARCO	The protein encoded by this gene is a member of the class A scavenger receptor family and is part of the **innate antimicrobial** immune system.	**Overexpressed on day 7**			x
CONTROL AND IVERMECTIN GROUPS	**Inflammatory, TLR and Chemokines**	**TNFAIP6**	This protein has been shown to form a stable complex with inter-alpha-inhibitor (I alpha I), and thus enhance the serine protease inhibitory activity of I alpha I, which is important in the protease network associated with **inflammation**. This gene can be induced by **proinflammatory cytokines** such as tumor necrosis factor alpha and interleukin-1.		x	x	x
		CXCL11	**Chemokines** are a group of small structurally related molecules that regulate cell trafficking of various types of leukocytes through interactions with a subset of 7-transmembrane, G protein-coupled receptors. **IFN-gamma** is a potent inducer of transcription of this gene.		x		x
		CCR1	This gene encodes a member of the beta **chemokine** receptor family, which is predicted to be a seven transmembrane protein similar to G protein-coupled receptors. The ligands of this receptor include **macrophage inflammatory** protein 1 alpha, regulated on activation **normal T** expressed and secreted protein (RANTES), **monocyte** chemoattractant protein 3 (MCP-3), and **myeloid** progenitor inhibitory factor-1 (MPIF-1). Chemokines and their receptors mediated signal transduction are critical for the recruitment of effector immune cells to the site of **inflammation**.				x
		CCRL2	This gene encodes a **chemokine** receptor like protein. Chemokines and their receptors mediated signal transduction are critical for the recruitment of effector immune cells to the site of **inflammation**. This gene is expressed at high levels in primary **neutrophils** and primary **monocytes** and is further upregulated on **neutrophil** activation and during **monocyte** to **macrophage** differentiation.				x
		CCL8	Is a **cytokine** involved in immunoregulatory and **inflammatory** processes. This cytokine displays chemotactic activity for **monocytes**, **lymphocytes**, **basophils** and **eosinophils**.		x	x	x

CONTROL AND IVERMECTIN GROUPS		**IL10**	The protein encoded by this gene is a **cytokine** produced primarily by **monocytes** and to a lesser extent by **lymphocytes**. This cytokine has pleiotropic effects in immunoregulation and **inflammation**. It down-regulates the expression of Th1 cytokines, **MHC class II** Ags, and costimulatory molecules on macrophages. It also enhances **B cell** survival and **antibody production.**	**Overexpressed on day 1**			x
		IL1RN	The protein encoded by this gene is a member of the **interleukin** 1 cytokine family. This protein inhibits the activities of interleukin 1, alpha (IL1A) and interleukin 1, beta (IL1B), and modulates a variety of interleukin 1 related immune and **inflammatory** responses, particularly in the acute phase of infection and inflammation.		x		x
		LILRB4	This gene is a member of the leukocyte **immunoglobulin**-like receptor (LIR) family. The encoded protein belongs to the subfamily **B class** of LIR receptors. The receptor is expressed on immune cells where it binds to **MHC class I** molecules on **antigen-presenting** cells and transduces a negative signal that inhibits stimulation of an immune response. It is thought to control **inflammatory** responses and cytotoxicity to help focus the immune response and limit autoreactivity.				x
		LILRA5	The protein encoded by this gene is a member of the leukocyte **immunoglobulin**-like receptor (LIR) family. LIR family members are known to have activating and inhibitory functions in **leukocytes**. Crosslink of this receptor protein on the surface of **monocytes** has been shown to induce calcium flux and secretion of several **proinflammatory** cytokines, which suggests the roles of this protein in triggering innate immune responses.				x
		FCGR1A	This gene encodes a protein that plays an important role in the immune response. This protein is a high-affinity Fc-gamma receptor. mong its related pathways are ADORA2B mediated **anti-inflammatory** cytokines production				x
		NR4A1	Expression is induced by phytohemagglutinin in human **lymphocytes**. Translocation of the		x		x

CONTROL AND IVERMECTIN GROUPS	**Apoptosis**		protein from the nucleus to mitochondria induces **apoptosis**.				
		IFI6	This gene was first identified as one of the many genes induced by **interferon**. The encoded protein may play a critical role in the regulation of **apoptosis**.		x	x	x
		XAF1	This gene encodes a protein which binds to and counteracts the inhibitory effect of a member of the IAP (inhibitor of apoptosis) protein family. IAP proteins bind to and inhibit caspases which are activated during **apoptosis**.			x	x
		CEACAM1	This gene encodes a member of the carcinoembryonic antigen (CEA) gene family, which belongs to the **immunoglobulin** superfamily. It was found to be a cell-cell adhesion molecule detected on **leukocytes**. Multiple cellular activities have been attributed to the encoded protein, including roles in **apoptosis**, and the modulation of innate and adaptive immune responses.		x		x
		BCL2L14	Overexpression of this gene has been shown to induce **apoptosis** in cells.		x		x
		CASP5	Overexpression of the active form of this enzyme **induces apoptosis** in fibroblasts. The expression of this gene is regulated by **interferon-gamma**.		x		x
		TGM2	The protein encoded by this gene appears to be involved in **apoptosis**.				x
		BIRC5	This gene is a member of **the inhibitor of apoptosis** (IAP) gene family, which encode negative regulatory proteins that **prevent apoptotic cell death**	**Overexpressed on day 4**	x		
	Macrophages	**MSR1**	This gene encodes the class A **macrophage** scavenger.		x		x
	Monocytes	**IL31RA**	The protein encoded by this gene belongs to the type I **cytokine** receptor family. This receptor, with homology to gp130, is expressed on **monocytes**, and is involved in IL-31 signaling via activation of STAT-3 and STAT-5.		x		x
	Myeloid cells	**CD300E**	This gene encodes a member of the CD300 glycoprotein family of cell surface proteins expressed on myeloid cells.		x		x

CONTROL AND IVERMECTIN GROUPS	**Natural killers (NK)**	**LGALS3BP**	It appears to be implicated in immune response associated with **natural killer (NK)** and **lymphokine**-activated killer (LAK) cell cytotoxicity. The native protein binds specifically to a human **macrophage**-associated lectin known as Mac-2 and also binds galectin 1.				x
	Neutrophils	**DEFB1**	Defensins form a family of microbicidal and cytotoxic peptides made by **neutrophils**		x		x
	T cells	**IL4I1**	The expression of this gene is induced by the cytokine interleukin 4 in **B cells**. This gene is also expressed in **macrophages** and **dendritic cells**. This protein may play a role immune system escape as it is expressed in tumor-associated **macrophages** and **suppresses T-cell responses.**		x		x
		CD274	This gene encodes an immune inhibitory receptor ligand that is expressed by **T cells** and **B cells**. The encoded protein has **immunoglobulin** domains. Interaction of this ligand with its receptor **inhibits T-cell activation** and **cytokine production**. During infection or **inflammation** of normal tissue, this interaction is important for **preventing autoimmunity** by maintaining homeostasis of the immune response.				x
		IDO1	This enzyme is thought to play a role in **antimicrobial defense**, and immunoregulation. Through its expression in **dendritic cells**, **monocytes**, and **macrophages** this enzyme **modulates T-cell behavior** by its peri-cellular catabolization of the essential amino acid tryptophan.		x		x
		CLEC4F	Predicted to act upstream of or **within NK T cell activation.**		x		x
		IL27	The protein encoded by this gene is one of the subunits of a heterodimeric **cytokine** complex. This protein is related to **interleukin 12A** (IL12A). It interacts with a protein similar to **interleukin 12B** (IL12B), and forms a complex that has been shown to drive rapid expansion of **naive** but not memory **CD4(+) T cells.** The complex is also found to synergize strongly with **interleukin 12** to trigger **interferon gamma** (IFNG) production of **naive CD4(+) T cells.**		x		x

CONTROL AND IVERMECTIN GROUPS	**Interferons and viral sensing**	**IFIT2**	Among its related pathways are Overview of **interferons**-mediated signaling pathway and Cytokine Signaling in Immune system.		x	x	x
		ZBP1	This gene encodes a Z-DNA binding protein. The encoded protein plays a role in the **innate** immune **response** by binding to foreign DNA and inducing type-I **interferon** production.		x		x
		IFI16	This gene encodes a member of the HIN-200 (hematopoietic **interferon**-inducible nuclear antigens with 200 amino acid repeats) family of **cytokines**.				x
		SOCS1	This gene encodes a member of the STAT-induced STAT inhibitor (SSI), also known as **suppressor** of **cytokine** signaling (SOCS), family. The expression of this gene can be induced by a subset of cytokines, including **IL2, IL3** and **interferon** (IFN)-gamma. Knockout studies in mice suggested the role of this gene as a **modulator of IFN-gamma** action.				x
		IFITM9P	IFITM9P (**Interferon** Induced Transmembrane Protein 9 Pseudogene) is a pseudogene.				x
	Complement	**SERPING1**	This gene encodes a highly glycosylated plasma protein involved in the **regulation** of the **complement cascade.**		x	x	x
		C3AR1	C3a is an anaphylatoxin released during **activation** of the **complement** system.				x
		C1QB	This gene encodes the B-chain polypeptide of serum **complement** subcomponent C1q, which associates with C1r and C1s to yield the first component of the serum complement system.		x		x
		C1QC	This gene encodes the C-chain polypeptide of serum **complement** subcomponent C1q.		x		x
		BST2	Bone marrow stromal cells are involved in the **growth** and **development of B-cells**. This protein may play a role in pre-B-cell growth.				x
		LILRB5	This gene is a member of the **leukocyte immunoglobulin**-like receptor (LIR) family. The encoded protein belongs to the subfamily **B class** of LIR receptors.		x		x
		TNFSF13B	The protein encoded by this gene is a **cytokine** that belongs to the tumor necrosis factor (TNF) ligand family. This cytokine is expressed in B cell lineage cells, and acts as a potent **B cell activator**. It has been also shown to play an important role in the **proliferation** and **differentiation** of **B cells**.		x		x

CONTROL AND IVERMECTIN GROUPS	**B cells**	**TNFRSF17**	The protein encoded by this gene is a member of the TNF-receptor superfamily. This receptor is preferentially expressed in **mature B lymphocytes** and may be important for **B cell development** and **autoimmune** response.	**Overexpressed on day 4 and 7**	x		x
		JCHAIN	Enables IgA binding activity and protein homodimerization activity. Contributes to **immunoglobulin** receptor binding activity. Part of monomeric **IgA** immunoglobulin complex; pentameric **IgM** immunoglobulin complex; and secretory dimeric IgA immunoglobulin complex.		x		x
		IGKV1D-42, IGLV6-57, IGLV1-40, IGLV3-10, IGLV3-1, IGLV3-27, IGKV1-16	Predicted to be involved in immune response and to be part of **immunoglobulin** complex.		x		x
		IGLV3-25, IGLV3-19, IGKV1-5	Predicted to be involved in immune response.		x		x
		IGLC2, IGLC3	Predicted to enable antigen binding activity and immunoglobulin receptor binding activity and to be involved in activation of immune response		x		x
		IGHV1-67 and IGHGP	IGHV1-67, IGHGP and IGHV4-55 are pseudogenes.		x		x
		IGHV4-55		**Overexpressed on day 4**	x		
		IGHA1	Contributes to **immunoglobulin** receptor binding activity. Part of **monomeric** IgA immunoglobulin complex and **secretory dimeric IgA immunoglobulin complex**.		x		
		IGHG1	Predicted to enable antigen binding activity and **immunoglobulin** receptor binding activity, to be involved in **activation** of **immune** response, to act upstream of or within several processes, including **immunoglobulin** mediated immune response and positive regulation of **hypersensitivity**.	**Overexpressed on day 4 and 7**	x		x
		IGHV1-2, IGHV1-24, IGHV4-28, IGHV1-45, IGHV1-46, IGHV2-5, IGHV3-20, IGHV3-33, IGHV4-34, IGHV5-51,	Predicted to enable antigen binding activity and immunoglobulin receptor binding activity, to be involved in activation of immune response and		x		x

CONTROL AND IVERMECTIN GROUPS		**IGHV2-70D and IGHV4-31**	to be part of immunoglobulin complex, circulating.				
		IGHV2-26		**Overexpressed on day 4**	x		
		IGHV3-64		**Overexpressed on day 7**			x
		IGHG3	Predicted to enable antigen binding activity and **immunoglobulin** receptor binding activity.	**Overexpressed on day 4 and 7**	x		x
		VSIG10L	VSIG10L (V-Set And **Immunoglobulin** Domain Containing 10 Like) is a Protein Coding gene.		x		x
	Signal transduction	**LIF**	The protein encoded by this gene is a pleiotropic **cytokine** with roles in several different systems. It have a role in immune tolerance at the maternal-fetal interface. Gene Ontology (GO) annotations related to this gene include **signaling** receptor binding			x	x
		TNFSF10	The protein encoded by this gene is a cytokine that belongs to the tumor necrosis factor (TNF) ligand family. This protein binds to several members of TNF receptor superfamily. Gene Ontology (GO) annotations related to this gene include **signaling receptor** binding		x		x
		IL17RD	This gene encodes a membrane protein belonging to the **interleukin-17** receptor (IL-17R) protein family. The encoded protein is a component of the interleukin-17 receptor signaling complex. Among its related pathways are RAF/MAP kinase cascade and IL-17 Family **Signaling Pathways.**				x
CONTROL GROUP	**Antimicrobial response**	**TRAFD1**	The innate immune system confers host defense against **viral** and microbial **infection,** and TRAFD1 is a negative feedback regulator that **controls excessive immune responses.**				x
		ACOD1	Involved in defense response; positive regulation of **antimicrobial humoral response**; and **tolerance** induction to lipopolysaccharide.	**Overexpressed on day 1**			x
		LILRB1	This gene is a member of the leukocyte **immunoglobulin**-like receptor (LIR) family. The encoded protein belongs to the subfamily **B class** of LIR receptors. The receptor is expressed on immune cells where it binds to				x

CONTROL GROUP	**Inflammatory, TLR and chemokines**		**MHC class I** molecules on antigen-presenting cells and transduces a negative signal that inhibits stimulation of an immune response. It is thought to **control inflammatory responses** and cytotoxicity to help focus the immune response and limit autoreactivity.				
		SIGLEC11	This gene encodes a member of the sialic acid-binding **immunoglobulin**-like lectin family. This family member mediates **anti-inflammatory** and immunosuppressive signaling.				x
		AZU1	Azurophil granules, specialized lysosomes of the neutrophil, contain at least 10 proteins implicated in the killing of microorganisms. This gene encodes a preproprotein that is proteolytically processed to generate a mature azurophil granule antibiotic protein, with **monocyte** chemotactic and **antimicrobial activity.** It is also an important multifunctional **inflammatory** mediator.	**Overexpressed on day 7**			x
	Apoptosis	**SMAD1**	This protein mediates the signals of the bone morphogenetic proteins (BMPs), which are involved in **apoptosis** and development and immune responses.	**Overexpressed on day 1**			x
	Macrophages	**CD68**	This gene encodes a 110-kD transmembrane glycoprotein that is highly expressed by human **monocytes** and tissue **macrophages**. The protein is also a member of the scavenger receptor family. Scavenger receptors mediate the recruitment and **activation of macrophages.**				x
	T cell	**IDO-1**	This enzyme is thought to play a role in immunoregulation, and antioxidant activity. Through its expression in **dendritic cells**, **monocytes**, and **macrophages** this enzyme **modulates T-cell behavior** by its peri-cellular catabolization of the essential amino acid tryptophan		x		
	Platelet aggregation	**P2RY12**	This receptor is involved in **platelet aggregation**				x
		CLDN23	This gene is expressed in germinal center **B-cells**				x
		LILRP2	**LILRP2** (Leukocyte Immunoglobulin-Like Receptor Pseudogene 2) is a pseudogene				x
		IGKV6-21	Predicted to be involved in immune response and to be part of **immunoglobulin** complex.	**Overexpressed on day 4 and 7**	x		x

CONTROL GROUP	**B cell**	**IGKV1D-16 and IGKV1-27**		**Overexpressed on day 4**	x		
		IGHV6-1 and IGHV1-58	Predicted to enable antigen binding activity and immunoglobulin receptor binding activity, to be involved in activation of immune response and to be part of **immunoglobulin** complex, circulating.		x		
		IGHV3-13	Predicted to enable antigen binding activity and **immunoglobulin** receptor binding activity and to be involved in activation of immune response		x		
		IGKV3-20	Part of monomeric **IgA** immunoglobulin complex; pentameric **IgM** immunoglobulin complex; and **secretory IgA immunoglobulin** complex.	**Overexpressed on day 7**			x
		IGLV2-5, IGLVI-70 and IGHV1-17	IGLV2-5, IGLVI-70 and IGHV1-17 are pseudogenes				x
	Signal transduction	**SECTM1**	It is found in a perinuclear Golgi-like pattern and thought to be involved in hematopoietic and/or immune system processes. Gene Ontology (GO) annotations related to this gene include obsolete **signal transducer activity** and cytokine activity.	**Overexpressed on day 1**			x
		CD300C	The CMRF35 antigen, which was identified by reactivity with a **monoclonal antibody**, is present on **monocytes**, **neutrophils**, and some **T and B lymphocytes.** Gene Ontology (GO) annotations related to this gene include transmembrane **signaling receptor activity.**				x
		PRLR	This gene encodes a receptor for the anterior pituitary hormone, prolactin, and belongs to the type I cytokine receptor family. Among its related pathways are **PI3K-Akt signaling** pathway and **Prolactin Signaling.**				x
IVERMECTIN GROUP	**Response to virus**	**IFIT1B**	Predicted to be involved in defense **response to virus**. Predicted to act upstream of or within cellular response to **interferon-alpha** and i**nterferon-beta.**		x		
	Inflammatory, TLR and chemokines	**ORM1**	This gene encodes a key acute phase plasma protein. Because of its increase due to acute **inflammation**, this protein is classified as an acute-phase reactant. The specific function of this protein may be involved in aspects of **immunosuppression**.	**Overexpressed on day 7**			x

IVERMECTIN GROUP	**Apoptosis**	**SEPTIN4**	This gene is a member of the septin family of nucleotide binding proteins, and has a role in **apoptosis**.	**Overexpressed on day 1**	x		X
		TNFSF15	The protein encoded by this gene is a **cytokine** that belongs to the tumor necrosis factor (TNF) ligand family. It can activate NF-kappaB and MAP kinases, and acts as an autocrine factor to induce **apoptosis** in endothelial cells.				X
		IL24	This gene encodes a member of the **IL10** family of **cytokines**. Overexpression of this gene leads to elevated expression of several GADD family genes, which correlates with the induction of **apoptosis**.	**Overexpressed on day 4**	x		
	Macrophages	**IFI35**	Enables identical protein binding activity. Involved in **macrophage activation** involved in immune response	**Overexpressed on day 1**	x		x
		SIGLEC12	Sialic acid-binding **immunoglobulin**-like lectins (SIGLECs) are a family of cell surface proteins belonging to the immunoglobulin superfamily. It has been suggested that the protein is involved in the **negative** regulation of **macrophage** signaling by functioning as an inhibitory receptor.		x		x
	Neutrophils	**DEFA4**	Defensins are a family of **antimicrobial** and cytotoxic peptides thought to be involved in **host defense**. They are abundant in the granules of **neutrophils**.	**Overexpressed on day 7**			x
	Major histocompatibility complex	**CD1E**	This gene encodes a member of the CD1 family of transmembrane glycoproteins, which are structurally related to the **major histocompatibility complex** (MHC) proteins and form heterodimers with beta-2-microglobulin. The CD1 proteins mediate the presentation of primarily lipid and glycolipid antigens of self or microbial origin **to T cells**.				x
		FCGR2B	The protein encoded by this gene is a low affinity receptor for the Fc region of **immunoglobulin** gamma complexes. The encoded protein is involved in the phagocytosis of immune complexes and in the **regulation** of **antibody production** by **B-cells.**	**Overexpressed on day 1**	x		x

IVERMECTIN GROUP	**B cells**	**SIGLEC8**	Sialic acid-binding **immunoglobulin** (Ig)-like lectins, or SIGLECs are a family of type 1 transmembrane proteins in hemopoietic cells. SIGLEC8 have 2 conserved motifs: an immunoreceptor tyrosine-based inhibitory motif and a motif homologous to one identified in signaling **lymphocyte activation** molecule	**Overexpressed on day 4 and 7**	x		x
		IGLV4-69, IGLV4-60, IGLV3-9, IGLV4-3, IGKV1-6, IGKV1-9	Predicted to be involved in immune response and to be part of **immunoglobulin** complex.		x		x
		IGLV7-46, IGLV1-44, IGLV7-43, IGLV2-33, IGLV2-11, IGLV9-49, IGKV3D-15, IGKV3-7, IGKV2-29		**Overexpressed on day 4**	x		
		IGLV2-23		**Overexpressed on day 7**			x
		IGHV4-59, IGHV3-72, IGHV3-73, IGHV7-81 and IGHV3OR16-17	Predicted to enable antigen binding activity and **immunoglobulin** receptor binding activity, to be involved in activation of immune response and to be part of immunoglobulin complex, circulating.	**Overexpressed on day 4 and 7**	x		x
		IGLC7, IGHG2, IGHV3-15, IGHV1-18, IGHV3-38, IGHV4-39, IGHV3-48, IGHV3-66, IGHV1-69, IGHV3-43, IGHV3OR15-7		**Overexpressed on day 4**	x		
		IGHV3-47, IGLV2-34, IGLV2-5, IGKV2OR22-4 and IGHV3-63	IGHV3-47, IGLV2-34, IGLV2-5, IGKV2OR22-4, IGHV3-63, IGHV3-62, IGHV3-65, IGKV2-4, IGLV2-28, IGHV3-6, IGLV1-41, IGHV3-19, IGHV3-63 and IGKV2-26 are pseudogenes	**Overexpressed on day 4 and 7**	x		x

IVERMECTIN GROUP		**IGHV3-62, IGHV3-65, IGKV2-4, IGLV2-28, IGHV3-6, IGLV1-41, IGHV3-19, IGHV3-63 and IGKV2-26**		**Overexpressed on day 4**	x		
		IGSF1	This gene encodes a member of the **immunoglobulin**-like domain-containing superfamily.		x		
		IGLV3-21, IGLV2-14, IGKV1-17, IGKV2-30 and IGKV3-15	Predicted to be involved in immune response.		x		
		IGHV3-23	IGHV3-23 is related to immune response Fc epsilon RI pathway and Immune response NFAT in immune response. immunoglobulin		x		