Memory Phenotype of $CD8^+$ T Cells in Chronic Hepatitis C Virus Infection

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بسم الله الرحمن الرحيم

قَالُوا سُبْحَانَكَ لاَ عِلْمَ لَنَا
إِلاَّ مَا عَلَّمْتَنَا إِنَّكَ أَنتَ
الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم

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Dedication

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List of Abbreviations

ADAR1	Adenosine Deaminases acting on RNA
AINR	Activation-Induced NonResponsiveness
ALT	Alanine aminotransferase
APC	Antigen presenting cell
ARF	Alternate Reading Frame
ARFP	Alternate Reading Frame Protein
AST	Aspartate aminotransferase
Blimp-1	B lymphocyte-induced maturation protein 1
CARD	Caspase activation and recruitment domain
CCL19	Chemokine Ligand 19
CCL21	Chemokine Ligand 21
CCR7	Chemokine Receptor 7
CD	Cluster of Differentiation
CFSE	Carboxyfluorescien Diacetate Succinimidyl Ester
CLDN	Claudin Family
CM	Central memory
CMV	Cytomegalovirus
CTL	Cytotoxic T-Lymphocyte
CTLA-4	Cytotoxic T-lymphocyte antigen 4
Cy7	Cyanine7
DC	Dendritic Cell
DMSO	Dimethyl sulfoxide
DNA	Deoxyribonucleic acid
dsRNA	Doublestranded RNA
EBV	Ebstein-Barr virus
EIA	Enzyme immunoassay
ELISA	Enzyme-linked immunosorbent assay
FCS	Fetal calf serum
Fsc	Forward scatter
GAGs	Glycosaminoglycans
GrzB	Granzyme B
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HCWs	Health care workers
HEPES	Hydroxyethy-1-Piperazineethanesulfonic acid

HIV	Human Immune Deficiency Virus
HLA	Human leucocyte Antigen
HS	Highly Significant
HVR	Hypervariable region
IFNAR	Type 1 IFN-α/β receptors
IFN-α	IFN alpha
IFN-ß	IFN beta
IFN- γ	IFN gamma
IgG	Immunoglobulin G
IL	Interleukin
IPS-1	IFN-β promoter stimulator 1
IRF	Interferon regulatory factor
ISGF3	Interferon Stimulated Gene Factor
ISGs	Interferon Stimulated Genes
IsREs	IFN stimulated response elements
JAK	Janus Kinase
KLRG-1	Killer Lectin-like Receptor
LcK	Lymphocyte protein tyrosine kinase
LCMV	Lymphocyte Choriomeningitis Virus
LDL-R	LDL receptors
LSEC	Liver sinusoidal endothelial cells
MAP Kinase	Mitogen Activated Protein Kinase
MDC	Myeloid Dendritic Cell
MHC	Major histocompatibility complex
MFI	Mean Fluorescence Intensity
MICA	Major histocompatibility complex class I–related chain A
MPEC	Memory Precursor Effector Cells
nAbs	neutralizing Antibodies
NF-κB	Nuclear factor- κB
NK	Natural Killer cells
NS	Nonstructural protein
NS	Non-Significant
OAS1	Oligoadenylate synthetasest
PBMC	Peripheral blood mononuclear cells
PBS	Phosphate buffer saline
PCR	Polymerase Chain Reaction
PD-1	Programmed cell death-1

PDC	Plasmacytoid Dendritic Cell
PDL-1	Programmed cell death-1 receptor ligand
PE	Phycoerythin
PerCP	Peridinin Chlorophyll protein
PeCY7	Phycoerythrin-Cyanine7
PHA	Phytohaemagglutinin
PI	Proliferation index
PIHRG	Proliferation Index High Risk Group
PKR	Protein kinase R
PMA	Phorbol Myristate Acetate
RIBA	Recombinant Immunoblot Assay
RIG-I	Retinoic acid–inducible gene I
RNA	Ribonucleic acid
RNase L	endoribonuclease L
S	Significant
SLEC	Short Lived Effector Cells
SOCS	Suppressor of Cytokine Signaling 1
SPSS	Statistical Package for Special Sciences
SR-B1	Scavenger Receptor class B1
Ssc	Side scatter
STAT	Signal Transducer and Activator of Transcription
TCM	Central Memory T Cells
TCR	T Cell Receptor
TEM	Effector Memory T Cells
TGF	Tansforming Growth Factor
Th	T- helper
Th2	T-helper 2
TIR	Toll/Interleukin-1Receptor
TLR	Toll Like Receptor
TMA	Transcription-mediated amplification
TNF	Tumor necrosis factor
TNFR1	Tumor Necrosis Factor Receptor 1
Treg	Regulatory T cells
TRIF	TIR-domain-containing adapter-inducing interferon-β
Tyk2	Tyrosine Kinase2
UTR	Untranslated Region
VZV	Varicella-Zoster Virus