



# **The Relation Between Effector and Inhibitory Markers Expressed on CD8<sup>+</sup> T Cells in Hepatitis C Virus Infection**

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In Clinical and Chemical Pathology

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# العلاقة بين الدلالات التأثيرية والمثبطة الظاهرة على سطح الخلايا التوتية $CD8^+$ في الالتهاب الكبدي الفيروسي سي

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## ***List of Abbreviations***

<b>ALT</b>	: Alanine aminotransferase
<b>ADAR1</b>	: Adenosine deaminases acting on RNA
<b>AICD</b>	: Activation induced cell death
<b>AINR</b>	: Activation induced nonresponsiveness
<b>ARFP</b>	: Alternate Reading Frame Protein
<b>APC</b>	: Antigen presenting cell
<b>AST</b>	: Aspartate aminotransferase activity
<b>bDNA</b>	: Branched DNA
<b>Bim</b>	: Building inflammatory protein
<b>Blimp-1</b>	: B lymphocyte induced maturation protein 1
<b>BTLA</b>	: B and T-lymphocyte attenuator
<b>CARD</b>	: Caspase activation and recruitment domain
<b>CDC</b>	: Centers for disease control and prevention
<b>cDNA</b>	: Complementary DNA copy
<b>CDR</b>	: Complement determining regions
<b>CLDN</b>	: Claudin family
<b>CMV</b>	: Cytomegalo virus
<b>CTL</b>	: Cytotoxic T-Lymphocyte
<b>CTLA-4</b>	: Cytotoxic T-lymphocyte antigen 4
<b>DC</b>	: Dendritic Cell
<b>DNA</b>	: Deoxyribonucleic acid
<b>Ds RNA</b>	: Double stranded RNA
<b>DN</b>	: Double negative
<b>DP</b>	: Double positive
<b>EBV</b>	: Epstein Bar virus
<b>EDTA</b>	: Ethylenediamine tetra-acetic acid
<b>EIA</b>	: Enzyme immunoassay
<b>ELISA</b>	: Enzyme-linked immunosorbent assay
<b>ER</b>	: Endoplasmic reticulum
<b>Eomes</b>	: Eomesodermin

<b>FBS</b>	: Fetal bovine serum
<b>FDA</b>	: Food and Drug Administration
<b>GAGs</b>	: Glycosaminoglycans
<b>GAS</b>	: Gamma activated sequences
<b>gC1qR</b>	: Globular domain of C1q receptor
<b>GITR</b>	: Glucocorticoid-induced TNF receptor
<b>GrzB</b>	: Granzyme B production
<b><math>\gamma</math>-GT</b>	: Gamma Glutamyl Transferase
<b>HBV</b>	: Hepatitis B virus
<b>HCC</b>	: Hepatocellular carcinoma
<b>HCV</b>	: Hepatitis C virus
<b>HCWs</b>	: Health care workers
<b>HIV</b>	: Human Immune Deficiency Virus
<b>HLA</b>	: Human leucocyte antigen
<b>HS</b>	: Highly Significant
<b>HSV</b>	: Herpes simplex virus
<b>HSCT</b>	: Hematopoietic stem cell transplantation
<b>HVR</b>	: Hypervariable region
<b>HVEM</b>	: Herpesvirus entry mediator
<b>IFN</b>	: Interferon
<b>IFN- <math>\alpha</math></b>	: IFN alpha
<b>IFN- <math>\gamma</math></b>	: IFN gamma
<b>IFN- <math>\gamma</math>R</b>	: IFN gamma receptor
<b>IgG</b>	: Immunoglobulin G
<b>IL</b>	: Interleukin
<b>IL-10R</b>	: Interleukin 10 receptor
<b>IRF</b>	: Interferon regulatory factor
<b>IV</b>	: Intravenous
<b>ISDR</b>	: IFN- $\alpha$ sensitivity determining region
<b>ISGs</b>	: interferon stimulated genes
<b>ISRE</b>	: interferon stimulated response element

<b>ITIM</b>	: immunoreceptor tyrosine-based inhibitory motif
<b>IPS-I</b>	: IFN- $\beta$ promoter stimulator 1
<b>JAK</b>	: Janus Kinase
<b>KLRG-1</b>	: Killer lectin-like receptor
<b>LCMV</b>	: Lymphocyte choriomeningitis virus
<b>LDL-R</b>	: LDL receptors
<b>LFL</b>	: Log fluorescence
<b>LILs</b>	: Liver inflammatory lymphocytes
<b>LSEC</b>	: Liver sinusoidal endothelial cells
<b>MAFA</b>	: Mast cell function associated Ag
<b>MDc</b>	: Myloid Dendritic Cell
<b>MHC</b>	: Major histocompatibility complex
<b>MICA</b>	: Major histocompatibility complex class I-related chain A
<b>MIP-1 <math>\beta</math></b>	: Macrophage inflammatory protein 1 $\beta$
<b>MNL</b>	: Mononuclear cell layer
<b>MPEC</b>	: Memory precursor effector cell
<b>MPGN</b>	: Membranoproliferative glomerulonephritis
<b>nAbs</b>	: Neutralizing antibodies
<b>NANBH</b>	: Non-A, non-B hepatitis
<b>NC</b>	: Non-coding
<b>NF-<math>\kappa</math>B</b>	: Nuclear factor- $\kappa$ B
<b>NK</b>	: Natural killer cells
<b>NKR</b>	: Natural killer cells receptor
<b>NKT</b>	: Natural killer T cells
<b>NS</b>	: Nonstructural protein
<b>NS</b>	: Non-Significant
<b>OAS1</b>	: Oligoadenylate synthetase
<b>PAT</b>	: Parenteral antischistosomal therapy
<b>PBMC</b>	: Peripheral blood mononuclear cell

<b>PBS</b>	: Phosphate buffer saline
<b>PC</b>	: Personal computer
<b>PCR</b>	: Polymerase chain reaction
<b>PDC</b>	: Plasmacytoid dendritic cell
<b>PD-1</b>	: Programmed cell death-1
<b>PDL-1</b>	: Programmed cell death-1 receptor ligand
<b>PKR</b>	: RNA dependant protein kinase
<b>PHS</b>	: Pooled human serum
<b>PI-v HRG</b>	: Proliferation Index -ve High Risk group
<b>PI+v HRG</b>	: Proliferation Index +ve High Risk group
<b>RIBA</b>	: Recombinant immunoblot assay
<b>RIG-I</b>	: Retinoic acid-inducible gene I
<b>RNA</b>	: Ribonucleic acid
<b>RNase L</b>	: endoribonuclease L
<b>RT-PCR</b>	: Reverse transcriptase PCR
<b>S</b>	: Significant
<b>SIV</b>	: Simian immunodeficiency virus
<b>SLEC</b>	: Short lived effector cell
<b>SPSS</b>	: Statistical Package for Special Sciences
<b>SR-B1</b>	: Scavenger receptor class B1
<b>STAT</b>	: Signal transducer and activator of transcription
<b>TAP</b>	: Transporter associated with antigen processing
<b>TCR</b>	: T cell receptor
<b>TCM</b>	: Central memory cells
<b>TEM</b>	: Effector memory cells
<b>TGF <math>\beta</math></b>	: Transforming growth factor $\beta$
<b>Th2</b>	: T-helper 2
<b>TLR</b>	: Toll like receptor
<b>TIR</b>	: Toll/interleukin-1 receptor

<b>TMA</b>	: Transcription-mediated amplification
<b>TNF</b>	: Tumor necrosis factor
<b>T-regs</b>	: T regulatory
<b>TRIF</b>	: Toll/IL-1 domain containing adaptor inducing IFN- $\beta$
<b>TRM</b>	: Tissue residual memory T cell
<b>UTR</b>	: Untranslated region
<b>VSV</b>	: Vesicular stomatitis virus
<b>VV</b>	: Vaccinia virus
<b>VZV</b>	: Varicella zoster virus
<b>WHO</b>	: World Health Organization