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## LIST OF ABBREVIATIONS

<b>(+)</b>	: Positive.
<b>(-)</b>	: Negative.
<b><math>\Delta A/\text{min}</math></b>	: Absorbance rate per minute.
<b>aa</b>	: amino acid.
<b>A</b>	: Absorbance.
<b>A600/800nm</b>	: Absorbance 600/800 Nano-meter.
<b>A (1→4)</b>	: Grad of activity evaluates intensity of necro inflammatory.
<b>ABI</b>	: Applied biosystem.
<b>ADP</b>	: Adenosine diphosphate.
<b>AE</b>	: Elution buffer of cell nucleic acid.
<b>AFP</b>	: Alpha fetoprotein.
<b>AGE</b>	: A garose gel electrophoresis.
<b>Ag-Ab</b>	: Antigen-Antibody complex.
<b>AL</b>	: Cell lysis buffer.
<b>ALB</b>	: Albumin.
<b>ALP</b>	: Alkaline phosphatase.
<b>ALT</b>	: Alanine aminotransferase.
<b>ANA</b>	: Anti-Nuclear Antibody.
<b>Apo-B</b>	: Apoprotein-B.
<b>AST</b>	: Aspartate transferase.
<b>ATP</b>	: Adenosine triphosphate.
<b>AUC</b>	: Area under the curve.
<b>AVE</b>	: Eluted viral nucleic acid.
<b>AVL</b>	: QiaAmp Viral Lysis.
<b>AW</b>	: Washing nucleic acid.
<b>bp</b>	: Base Pair.
<b>BCIP</b>	: 5-Bromo-4-chloro-3-indolyl-phosphate.
<b>BCP</b>	: Bromocresol purple.
<b>BMI</b>	: Body mass index.
<b>BT</b>	: Breakthrough.
<b>C</b>	: Core.
<b>°C</b>	: Degree centigrade.

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<b>CD81</b>	: Cluster of Differentiation 81.
<b>cDNA</b>	: Complementary DNA.
<b>CI</b>	: Confidence interval.
<b>CHC</b>	: Chronic hepatitis C.
<b>CKII</b>	: Casein kinase II.
<b>CLDN</b>	: Claudin-1 receptor mediate HCV entry
<b>CLIA</b>	: Chemiluminescent enzyme immunometric assay.
<b>Cr</b>	: Creatinine.
<b>CREs</b>	: The cis-acting replication elements.
<b>CTLA4</b>	: Cytotoxic T-lymphocyte-associated protein 4.
<b>Cs</b>	: Known standard Concentration.
<b>D</b>	: Domain.
<b>dATP</b>	: 2'-deoxyadenosine triphosphate.
<b>D.Bil</b>	: Direct bilirubin.
<b>dCTP</b>	: 2'-deoxycytidine 5'-triphosphate.
<b>DCs</b>	: Dendritic cells.
<b>DExH/D-box</b>	: proteins are the largest group of enzymes in eukaryotic RNA metabolism
<b>dGTP:</b>	: 2'-deoxyguanosine 5'-triphosphate.
<b>DNA</b>	: Deoxyribonucleic acids.
<b>dNTPs</b>	: Deoxynucleoside, 5' triphosphates.
<b>dTTP</b>	: 2'-deoxythymidine 5'-triphosphate.
<b>E</b>	: Envelope glycoproteins.
<b>EDTA</b>	: Ethylene Diamine Tetra Acetic Acid.
<b>eIF3</b>	: Eukaryotic initiation factor 3.
<b>ELISA</b>	: Enzyme Linked Immuno Sorbent Assay.
<b>EMCV</b>	: Encephalo myocarditis virus.
<b>EoTR</b>	: End-of treatment response.
<b>ER</b>	: Endoplasmic reticulum.
<b>et al</b>	: et alter.
<b>EtOH</b>	: Ethanol.
<b>EVR</b>	: Early Virological Response.
<b>F(1-4)</b>	: Stage of liver fibrosis from 1 to 4
<b>FAM</b>	: 6-carboxy fluorescein
<b>FBS</b>	: Fasting blood glucose.

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<b>FFAS</b>	: Free fatty acids.
<b>Fig</b>	: figure.
<b>FRET</b>	: Fluorescence (or Forster) Resonance Energy Transfer
<b>g</b>	: Relative centrifugal force.
<b>G/U</b>	: Guanine/ uracil nucleotides.
<b>GAS</b>	: Gamma activated sequence.
<b>GBV</b>	: The GB viruses (hepatitis G virus (HGV) also known as HPgV.
<b>GBV-B</b>	: Hepatitis GB virus B.
<b>GGT</b>	: Gamma Glutamyl Transferase.
<b>GLUT-4</b>	: Glucose transferase-4.
<b>GWAS</b>	: Genome-wide association studies.
<b>g/L</b>	: Gram per liter.
<b>g/dL</b>	: Gram per deciliter.
<b>g/ml</b>	: gram per millimeter.
<b>µg/kg/week</b>	: microgram per every kilogram every week.
<b>H<sub>2</sub>O</b>	: Water.
<b>H<sub>2</sub>O<sub>2</sub></b>	: Hydrogen peroxide.
<b>HBs-Ag</b>	: Hepatitis B virus surface antigen.
<b>HBV Ag</b>	: Hepatitis B virus antigen.
<b>HBV</b>	: Hepatitis B virus.
<b>HCC</b>	: Hepatocellular Carcinoma.
<b>HCV</b>	: Hepatitis C virus.
<b>HCV Ab</b>	: HCV antibodies.
<b>HCV-Ag</b>	: HCV antigen.
<b>HCV-GT 1</b>	: Hepatitis C Virus genotype-1.
<b>HCV 4</b>	: Hepatitis C Virus genotype 4.
<b>HCVcc</b>	: HCV in cell culture.
<b>HCVpp</b>	: HCV pseudo particle.
<b>HDL</b>	: High-Density lipoprotein
<b>HDL-C</b>	: High density lipoprotein cholesterol.
<b>HIV</b>	: Human Immunodeficiency Virus.
<b>HOMA-IR</b>	: Homeostasis Model for Assessment of insulin resistance.
<b>HPLC</b>	: High performed liquid gas chromatography.
<b>Huh-7</b>	: Human hepatocyte cell-7.

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<b>IFCC</b>	: International Federation of Clinical Chemistry.
<b>IFN</b>	: Type I interferon.
<b>IFNAR</b>	: The interferon alpha/beta receptor.
<b>IFNAR2c</b>	: Interferon alpha receptor chain 2.
<b>IFNGR</b>	: The interferon gamma receptor.
<b>IFN-λ</b>	: Interferon- lambda.
<b>IFN-α</b>	: Interferon-alpha.
<b>IFN-β</b>	: Interferon-beta.
<b>IFN-γ</b>	: Interferon-gamma.
<b>IL</b>	: Interleukin.
<b>IL-10R</b>	: Interleukin-10 receptor.
<b>IL-28B</b>	: Interleukin-28B.
<b>INR</b>	: International Normalized Ratio.
<b>Ins</b>	: Insulin.
<b>IR</b>	: Insulin resistance.
<b>IRES</b>	: Internal ribosome entry site.
<b>IRF9</b>	: Interferon regulatory factor 9.
<b>IRS</b>	: Insulin receptor substrates.
<b>ISDR</b>	: Interferon sensitivity determining region.
<b>ISGF3</b>	: Interferon stimulated gene factor 3.
<b>ISGs</b>	: Interferon stimulated genes.
<b>IU/L</b>	: International unit per liters.
<b>IU/mL</b>	: International unit per milliliters.
<b>JAK1</b>	: Janus kinase 1.
<b>Kb</b>	: kilo base.
<b>Kbp</b>	: kilo base pair.
<b>KDa</b>	: Kilo Dalton
<b>Kg</b>	: Kilogram.
<b>Kg/m<sup>2</sup></b>	: Kilogram/meter square.
<b>LDL</b>	: Low-density lipoprotein.
<b>LDL-C</b>	: Low density lipoprotein cholesterol.
<b>LDs</b>	: Lipid droplets.
<b>LMP7</b>	: Low molecular mass polypeptide 7.
<b>M</b>	: Male.

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<b>MBL</b>	: Monoclonal B-Cell Lymphocytosis.
<b>mg</b>	: Milligram.
<b>µg/kg/week</b>	: Microgram per kilogram every week.
<b>µmol/L</b>	: Micromole per liter.
<b>µL</b>	: Microliter.
<b>µIU/ml</b>	: Micro international unit per millimeter.
<b>MGB</b>	: Minor groove binder.
<b>mg/dL</b>	: Milligram per deciliter.
<b>mg/kg/day</b>	: Milligram per kilogram per day.
<b>min</b>	: Minute.
<b>miR</b>	: MicroRNAs.
<b>miRNAs</b>	: Micro ribonucleic acid.
<b>mlU/L</b>	: Micro international unit per liter.
<b>mmol/ L</b>	: Millimole per liter.
<b>mRNA</b>	: Messenger ribonucleic acid.
<b>MxA</b>	: Myxovirus Resistance Gene A.
<b>MX1</b>	: Myxovirus-resistant 1.
<b>N</b>	: Negative.
<b>NAD</b>	: Nicotinamide adenine dinucleotide.
<b>NADH</b>	: Nicotinamide adenine dinucleotide hydrogenates.
<b>NANBH</b>	: Non-A, non-B hepatitis
<b>ng/µl</b>	: Nanogram per microliter.
<b>nm</b>	: Nano-meter.
<b>NMR</b>	: Nuclear magnetic resonance.
<b>NFQ</b>	: Non-fluorescent quencher.
<b>NR</b>	: Non-Response.
<b>NS</b>	: Nonstructural proteins
<b>NS4A</b>	: Nonstructural proteins 4A.
<b>nt</b>	: Nucleotides.
<b>NTC</b>	: Non Template Control.
<b>NTPase</b>	: Nucleoside triphosphatases.
<b>NTRs</b>	: Non translated RNA segments.
<b>OAS1</b>	: genes encoding active 2'-5'oligoadenylate synthetase (OAS) enzymes.
<b>OAS</b>	: 2'-5'oligoadenylate synthetase.

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<b>OCN</b>	: Occludin receptor.
<b>OR</b>	: Odds Ratio.
<b>ORF</b>	: Open reading frame
<b>p</b>	: Probability.
<b>p7</b>	: Protein (ion channel or viroporin).
<b>p53</b>	: Protein 53(tumor suppressor).
<b>PBS</b>	: peripheral blood sample.
<b>PCR</b>	: Polymerase chain reaction.
<b>PEG</b>	: Polyethylene glycol.
<b>PEG-INF</b>	: Pegylated interferon.
<b>PI3K</b>	: Phosphatidyl-inositol-3-kinase.
<b>PKR</b>	: Protein kinase R.
<b>PMT</b>	: Photomultiplier tube.
<b>PNR</b>	: Primary Non-Response.
<b>PO<sub>4</sub></b>	: Phosphate.
<b>PP2h</b>	: Postprandial glucose level after 2 hour.
<b>PPBI</b>	: Postprandial blood glucose.
<b>PRKR</b>	: Protein kinase RNA-regulated.
<b>PT</b>	: Prothrombin time.
<b>PC</b>	: Prothrombin concentration.
<b>R</b>	: Responder.
<b>RBV</b>	: Ribavirin.
<b>RDRP</b>	: RNA dependent RNA polymerase.
<b>RIG-I</b>	: Retinoic acid inducible gene.
<b>RNA</b>	: Ribonucleic acid.
<b>Rn</b>	: Reporter normalized.
<b>RF</b>	: Replicative form.
<b>ROC</b>	: Receiver-operator characteristic
<b>Rpm/rpm</b>	: Round per minute/ Revolutions per minute.
<b>RT</b>	: Reverse transcriptase enzyme.
<b>Rs60</b>	: rs12979860.
<b>RVR</b>	: Rapid Virological Response.
<b>S</b>	: Standard.
<b>SCH.Ab</b>	: Schistosomal antibodies.

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<b>SD</b>	: Standard deviation.
<b>SDS</b>	: Sequence Detection System.
<b>S.E</b>	: Standard Error.
<b>S.Ins</b>	: Serum insulin.
<b>SL</b>	: Stem-loop.
<b>SNP</b>	: Single Nucleotide polymorphisms.
<b>SOC</b>	: Standard of care.
<b>SOCS3</b>	: Suppressor of cytokine signaling 3.
<b>SPSS</b>	: Statistical Package for the Social Science.
<b>SR-BI</b>	: Scavenger receptor class B member I.
<b>SREBP-1c</b>	: Sterol regulatory element-binding protein 1c.
<b>STAT</b>	: Signal transducer and activator of transcription.
<b>SVR</b>	: Sustained Virological Response.
<b>T</b>	: Test.
<b>Taq</b>	: <i>Thermus aquaticus</i> .
<b>T.Bil</b>	: Total bilirubin.
<b>TBE</b>	: Tris Borate EDTA.
<b>TC</b>	: Total Cholesterol.
<b>T2DM</b>	: Type 2 diabetes.
<b>TG</b>	: Triglycerides.
<b>TGF-<math>\beta</math></b>	: Transforming growth factor-beta.
<b>Th</b>	: T helper cell.
<b>TLRs</b>	: Toll-like receptors.
<b>TM</b>	: Trans membrane.
<b>Tm</b>	: melting temperature.
<b>TMA</b>	: Transcription-mediated amplification.
<b>TMB</b>	: Tetra methyl benzidine.
<b>TNF- <math>\alpha</math></b>	: Tumor necrosis factor $\alpha$ .
<b>TRAIL</b>	: Tumor necrosis factor (TNF)-related apoptosis inducing ligand.
<b>TSH</b>	: Thyrotropin (Thyroid-Stimulating hormone).
<b>TYK2</b>	: Tyrosine kinase 2.
<b>U/L</b>	: Units/L.
<b>3'UTR</b>	: 3 prime untranslated region.
<b>5'UTR</b>	: 5 prime untranslated region.

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<b>UTR</b>	: Untranslated region.
<b>U/UC</b>	: Uracil/Uracil C.
<b>UV</b>	: Ultraviolet.
<b>VLDL</b>	: Very- Low-density lipoprotein.
<b>VSL</b>	: Variable Stem-loop.
$\lambda$	: Wave length (lambda).
$\chi^2$	: Chi square.
$\bar{X}$	: Mean.