

## LIST OF ABBREVIATIONS

<b>4E-BP1</b>	: Eukaryotic initiation factor 4E binding protein 1
<b>Ab</b>	: Antibody
<b>AFP</b>	: Alpha fetoprotein
<b>ALT</b>	: Alanine aminotransferase
<b>AMPK</b>	: Adenosine-monophosphate-activated protein kinase
<b><math>\alpha</math>-SMA</b>	: Alfa-smooth muscle actin
<b>AST</b>	: Aspartate aminotransferase
<b>Atg</b>	: Autophagy-related protein
<b>ATP</b>	: Adenosine triphosphate
<b>BCLC</b>	: The Barcelona Clinic Liver Cancer
<b>BDL</b>	: Bile duct ligation
<b>Beclin 1</b>	: Bcl-2-interacting myosin-like coiled-coil protein
<b>CD</b>	: Cluster of differentiation
<b>Cdc</b>	: Cyclin-dependent kinase
<b>CHC</b>	: Chronic hepatitis C
<b>CLIP</b>	: The Cancer of the Liver Italian Program
<b>CMA</b>	: Chaperone-mediated autophagy
<b>CNI</b>	: Calcineurin inhibitors
<b>CT</b>	: Computed tomography
<b>CTL</b>	: Cytotoxic T lymphocytes
<b>DAB</b>	: 3, 3' Diaminobenzidinetetrahydrocholride
<b>DC</b>	: Dendritic cell
<b>Deptor</b>	: The DEP-domain-containing mTOR-interacting protein
<b>DNA</b>	: Deoxyribonucleic acid
<b>ECM</b>	: Extracellular matrix
<b>eIF4E</b>	: Eukaryotic initiation factor 4E
<b>ELISA</b>	: Enzyme linked immunosorbant assay
<b>ER</b>	: Endoplasmic reticulum
<b>FET</b>	: Fisher's Exact test
<b>FKBP</b>	: FK506-binding protein
<b>Foxp3</b>	: Forkhead box P3
<b>FRAP</b>	: FK506 binding protein 12-rapamycin associated protein
<b>FRB</b>	: FKBP12-rapamycin binding
<b>G6PDH</b>	: Glucose-6-phosphate dehydrogenase
<b>GCN2</b>	: General control nonderepressible 2
<b>GGT</b>	: Gamma glutamyltranspeptidase

<b>GI</b>	: Gastrointestinal
<b>GTPases</b>	: Guanosine triphosphatases
<b>GβL</b>	: G protein b-subunit-like
<b>Hb</b>	: Hemoglobin
<b>HBV</b>	: Hepatitis B virus
<b>HCC</b>	: Hepatocellular carcinoma
<b>HCMV</b>	: Human cytomegalovirus
<b>HCV</b>	: Hepatitis C virus
<b>HIF-1</b>	: Hypoxia-inducible transcription factor-1
<b>HIV</b>	: Human immunodeficiency virus
<b>HMGB1</b>	: High mobility group 1
<b>HRP</b>	: Horseradish Peroxidase
<b>HSCs</b>	: Hepatic stellate cells
<b>hTERT</b>	: Human telomerase reverse transcriptase
<b>HVR</b>	: Hypervariable regions
<b>IFN</b>	: Interferon
<b>IGF</b>	: Insulin-like growth factor
<b>IHH</b>	: Immortalized human hepatocytes
<b>IKKβ</b>	: Inhibitor of nuclear factor κB kinase β
<b>IL</b>	: Interleukin
<b>iNKT cells</b>	: Invariant natural killer T cells
<b>iNOS</b>	: Inducible NO synthase
<b>INR</b>	: International normalized ratio
<b>IP3</b>	: Myo-inositol-1,4,5-triphosphate
<b>IRGM</b>	: The immunity-associated GTPase family M
<b>IRS-1</b>	: Insulin receptor substrate-1
<b>LAMP</b>	: Lysosome-associated membrane protein
<b>LC3</b>	: Microtubule-associated protein light chain 3
<b>MELD</b>	: Model for End Stage Liver Disease
<b>MHC</b>	: Major histocompatibility complex
<b>MMP</b>	: Matrix metalloproteinase
<b>mRNA</b>	: Messenger ribonucleic acids
<b>mTOR</b>	: Mammalian target of rapamycin
<b>mTORC</b>	: mTOR complex
<b>NASH</b>	: Non-alcoholic steatohepatitis
<b>NFκB</b>	: Nuclear factor κB
<b>NK</b>	: Natural killer
<b>Nrf2</b>	: Nuclear factor (erythroid-derived 2)-like factor 2

<b>NS</b>	: Non-structural
<b>OD</b>	: Optical density
<b>PA</b>	: Prothrombin activity
<b>PBS</b>	: Phosphate buffered saline
<b>PCD</b>	: Programmed cell death
<b>PCR</b>	: Polymerase chain reaction
<b>PDGF</b>	: Platelet-derived growth factor
<b>PE</b>	: Phosphatidylethanolamine
<b>PI3K</b>	: Phosphoinositol 3-kinase
<b>PI3P</b>	: Phosphatidylinositol-3-phosphate
<b>PIP2</b>	: Phosphatidylinositol-3,4-bisphosphate
<b>PIP3</b>	: Phosphatidylinositol-3,4,5-triphosphate
<b>PKA</b>	: Protein kinase A
<b>p-mTOR</b>	: Phosphorylated-mTOR
<b>PPAR<math>\gamma</math></b>	: Peroxisome proliferator-activated receptor- $\gamma$
<b>PRAS40</b>	: Proline-rich AKT substrate of 40 kDa
<b>PTEN</b>	: Phosphatase and tensin homolog
<b>RAFT</b>	: Rapamycin and FKBP12 target
<b>RAPT 1</b>	: Rapamycin target 1
<b>Raptor</b>	: Regulatory-associated protein of mTOR
<b>Rapalogs</b>	: Rapamycin analogs
<b>RdRp</b>	: RNA-dependent RNA polymerase
<b>Rheb</b>	: Ras homolog enriched in the brain
<b>RpS6</b>	: Ribosomal protein S6
<b>Rictor</b>	: Rapamycin- insensitive companion of mTOR
<b>RNA</b>	: Ribonucleic acid
<b>ROC</b>	: Receiver-operating characteristic
<b>ROS</b>	: Reactive oxygen species
<b>rRNA</b>	: Ribosomal ribonucleic acid
<b>S6K1</b>	: S6 Kinase 1
<b>SD</b>	: Standard Deviation
<b>SEP</b>	: Sirolimus effector protein
<b>SREBP-1</b>	: Sterol regulatory element binding protein-1
<b>STAT</b>	: Signal transducer and activator of transcription
<b>STK11/LKB1</b>	: Serine/threonine kinase 11
<b>TCA</b>	: Tricarboxylic acid
<b>TCR</b>	: T cell receptor
<b>TGF-<math>\beta</math></b>	: Transforming growth factor beta

<b>Th</b>	:	T helper
<b>TLR</b>	:	Toll-like receptor
<b>TNF</b>	:	Tumor necrosis factor
<b>TOR</b>	:	Target of rapamycin
<b>TORKinibs</b>	:	mTOR kinase inhibitors
<b>TOS</b>	:	TOR signaling
<b>TRAIL</b>	:	Tumor necrosis factor-related apoptosis-inducing ligand
<b>Treg</b>	:	T regulatory cells
<b>TSC</b>	:	Tuberous Sclerosis Complex
<b>ULK1</b>	:	UNC51-like kinase 1
<b>UPR</b>	:	Unfolded protein response
<b>UTR</b>	:	Untranslated region
<b>UVRAG</b>	:	Ultraviolet radiation resistance-associated gene
<b>VEGF</b>	:	Vascular endothelial growth factor

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