

# **Expression of Tie-2 in Acute Myeloid Leukemia**

**Thesis**

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## LIST OF ABBREVIATIONS

<b>Aa</b>	Amino acid
<b>AKT</b>	Protein kinase B
<b>ALL</b>	Acute lymphoblastic leukemia
<b>AML</b>	Acute myeloid leukemia
<b>AMMoL</b>	Acute myelomonocytic leukemia
<b>AMoL</b>	Acute monoblastic leukemia
<b>ANAE</b>	$\alpha$ -naphthyl acetate esterase
<b>Ang</b>	Angiopoietin
<b>APL</b>	Acute promyelocytic leukemia
<b>APL-V</b>	Acute promyelocytic leukemia-variant
<b>ATP</b>	Adenosine triphosphate
<b>ATRA</b>	All-trans-retinoic acid
<b>B19</b>	Parvovirus B19
<b>BAALC</b>	Brain and acute leukemia cytoplasmic
<b>Bad</b>	Bcl <sub>2</sub> antagonist of cell death
<b>Bak</b>	Bcl <sub>2</sub> antagonist killer
<b>Bcl</b>	B cell leukemia/ lymphoma
<b>BCRP</b>	Breast cancer resistance protein
<b>BM</b>	Bone marrow
<b>BMB</b>	Bone marrow blast
<b>BMI</b>	Body mass index
<b>BMT</b>	Bone marrow transplantation
<b>Ca</b>	Calcium
<b>CAE</b>	Chloroacetate esterase
<b>CBC</b>	Complete blood count
<b>CBF<math>\beta</math>/MYH11</b>	Core binding factor $\beta$ /myocin heavy chain II
<b>CD</b>	Cluster of differentiation
<b>CDKs</b>	Cyclin dependent kinases
<b>CEBPA</b>	CCAAT/enhancer binding protein alpha
<b>CECs</b>	Circulating endothelial cells
<b>CIR</b>	Cumulative incidence of relapse
<b>C-KIT</b>	Steal factor
<b>CML</b>	Chronic myeloid leukemia

## **LIST OF ABBREVIATIONS(cont.)**

<b>CNS</b>	Central nervous system
<b>CR</b>	Complete remission
<b>CREB</b>	Cyclic adenosine monophosphate response binding protein
<b>CRD</b>	complete remission duration
<b>cyt</b>	Cytoplasmic
<b>DCC</b>	Deleted Colorectal Carcinoma
<b>del</b>	Deletion
<b>DFS</b>	Disease free survival
<b>DIC</b>	Disseminated intravascular coagulation
<b>DNA</b>	Deoxyribonucleic acid
<b>Dok-R</b>	Docking protein
<b>DW</b>	Distilled water
<b>ECD</b>	Extracellular regions
<b>ECs</b>	Endothelial cells
<b>EDTA</b>	Ethylene diamine tetra-acetic acid
<b>EFS</b>	Event- free survival
<b>EGF</b>	Epidermal growth factor
<b>ELISA</b>	Enzyme Linked Immunosorbent Assay
<b>EM</b>	Electron microscopy
<b>eNOS</b>	Endothelial nitric oxide synthase
<b>EPCs</b>	Endothelial progenitor cells
<b>EPO</b>	Erythropoietin
<b>ERG</b>	ETS related gene
<b>ETO</b>	Eight twenty one gene
<b>EVI1</b>	Ectopic viral integration site 1 gene
<b>FAB</b>	French-American-British
<b>FCM</b>	Flow cytometry
<b>FITC</b>	Fluorescein isothiocyanate
<b>FLT-3</b>	Fms-like tyrosine kinase

## LIST OF ABBREVIATIONS(cont.)

<b>FLT3-ITD</b>	Internal tandem duplication of the FLT3 gene
<b>FLT3-TKD</b>	Mutations in the tyrosin kinase domain of the FLT3 gene
<b>FN3</b>	3 repeats fibronectin-like
<b>G</b>	Gap
<b>GATA-1</b>	Gata binding protein 1 globin transcription factor 1
<b>G-CSF</b>	Granulocyte colony-stimulating factor
<b>GM-CSF</b>	Granulocyte monocyte colony stimulating factor
<b>GPA</b>	Glycoprotein A
<b>Grb2</b>	Growth factor receptor bound protein 2
<b>GSK</b>	Glycogen synthase kinase
<b>Hb</b>	Hemoglobin
<b>HGFs</b>	Hemopoietic growth factors
<b>HLA</b>	Human leucocyte antigen
<b>HS</b>	Highly significant
<b>HSCs</b>	Hematopoietic stem cells
<b>HSV</b>	Herpes simplex virus
<b>Ig</b>	Immunoglobulin
<b>IHC</b>	Immunohistochemistry
<b>IKK</b>	I kappa B kinase complex
<b>IL</b>	Interleukin
<b>inv</b>	Inversion
<b>IPT</b>	Immunophenotyping
<b>IRES</b>	Internal ribosome entry site
<b>K</b>	Potassium
<b>Kd</b>	Kilodalton
<b>K-EDTA</b>	K-ethylene diamine tetra-acetic acid
<b>KID</b>	kinase insert domain



## LIST OF ABBREVIATIONS(cont.)

<b>KIT</b>	Steel factor receptor
<b>K-Ras</b>	Kristen Ras
<b>LDH</b>	Lactate dehydrogenase
<b>LM</b>	Light microscopy
<b>LN</b>	Lymph node
<b>LRP</b>	Lung resistance protein
<b>M</b>	Mitosis or meiosis
<b>MAPK</b>	Mitogen activated protein kinase
<b>Mcl</b>	Myeloid cell leukemia
<b>M-CSF</b>	Macrophage- Colony stimulating factor
<b>MDR</b>	Multidrug resistance
<b>MDR-1</b>	Multidrug resistance gene-1
<b>MDS</b>	Myelodysplastic syndrome
<b>MFI</b>	Mean fluorescent intensity
<b>MIC</b>	Morphologic-immunologic- cytogenetic
<b>MLL</b>	Mixed Lineage Leukemia gene
<b>MN-1</b>	Meningioma gene
<b>MoAbs</b>	Monoclonal antibodies
<b>MPN</b>	Myeloproliferative neoplasms
<b>MPO</b>	Myelo-peroxidase
<b>MRD</b>	Minimal residual disease
<b>mRNA</b>	Messenger ribonucleic acid
<b>Na</b>	Sodium
<b>NaF</b>	Sodium fluoride
<b>NFI</b>	Neurofibromatosis
<b>NPM-1</b>	Nucleophosmin-1
<b>N-Ras</b>	Neuroblastoma Ras
<b>NS</b>	Non significant
<b>NSE</b>	Non specific esterase
<b>ORF</b>	Open reading frame
<b>OS</b>	Overall survival

## LIST OF ABBREVIATIONS(cont.)

<b>p</b>	Short arm
<b>P53</b>	Protein 53 KDa
<b>PAS</b>	Periodic acid Schiff
<b>PB</b>	Peripheral blood
<b>PBB</b>	Peripheral blood blasts
<b>PBS</b>	Phosphate buffered saline
<b>PBSC</b>	Peripheral blood stem cell transplantation
<b>PCR</b>	Polymerase chain reaction
<b>PDGFR</b>	Platelet derived growth factor receptor
<b>PE</b>	Phycoerythrin
<b>PGFR</b>	Platelet growth factor receptor
<b>Pgp</b>	P-glycoprotein
<b>Phi</b>	Philadelphia chromosome
<b>PIGF</b>	Placental growth factor
<b>PI3-K</b>	Phosphatidylinositol 3 kinase
<b>PKB</b>	Protein kinase B
<b>PKC</b>	Protein kinase C
<b>PML</b>	Promyelocytic Leukemia
<b>ppm</b>	Part per million
<b>PTB</b>	Phosphotyrosine binding
<b>q</b>	Long arm
<b>RAR <math>\alpha</math></b>	Retinoic acid receptor alpha
<b>RAS</b>	Rat sarcoma viral oncogene
<b>Rb</b>	Retinoblastoma
<b>RBCs</b>	Red blood cells
<b>RFS</b>	Relapse-free survival
<b>RI</b>	Relapse incidence
<b>RNA</b>	Ribonucleic acid
<b>RR</b>	Risk of relapse
<b>RTKs</b>	Receptor tyrosine kinases
<b>RT-PCR</b>	Reverse transcriptase-polymerase chain reaction

## LIST OF ABBREVIATIONS(cont.)

<b>S</b>	Synthesis
<b>SAR</b>	Structure-activity relationship
<b>SBB</b>	Sudan black-B
<b>SC</b>	Stem cell
<b>SCF</b>	Stem Cell factor
<b>SCT</b>	Stem cell transplantation
<b>SD</b>	Standard deviation
<b>SH2</b>	Src homology 2 domains
<b>SHp</b>	Protein tyrosine phosphatase
<b>Sig</b>	Significance
<b>SPSS</b>	Statistical package for Social Science
<b>sTie-2</b>	Soluble Tie-2
<b>t</b>	Translocation
<b>TA</b>	Telomerase activity
<b>t-AML</b>	Therapy-related myeloid leukemia
<b>TAMs</b>	Tumor-associated macrophages
<b>TEMs</b>	TIE2-expressing monocytes
<b>Tdt</b>	Terminal deoxynucleotidyl transferase
<b>TLC</b>	Total leukocytic count
<b>TNF</b>	Tumor necrosis factor
<b>TNF-<math>\alpha</math></b>	Tumor necrosis factor- $\alpha$
<b>TSG</b>	Tumor suppressor gene
<b>Tyr</b>	Tyrosine
<b>UTR</b>	Untranslated region
<b>VEGF</b>	Vascular endothelial growth factor
<b>VEGF-R</b>	Vascular endothelial growth factor receptor
<b>VEGF-Rs</b>	Vascular endothelial growth factor receptor kinases
<b>WBCs</b>	White blood cells
<b>WHO</b>	World Health Organization
<b>Wt-1</b>	Wilm's Tumor gene-1
<b><math>\mu</math>L</b>	Microliter

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