

## List of abbreviations

<b>AF 2</b>	:	Activation Function 2
<b>AP-1</b>	:	Activator protein-1
<b>ASOs</b>	:	Antisense oligonucleotides
<b>ATF</b>	:	Activating transcription factor
<b>BCC</b>	:	Breast cancer cell lines
<b>bZIP</b>	:	Basic leucine zipper
<b>cAMP</b>	:	Cyclic adenosine monophosphate
<b>CBP</b>	:	CREB-binding protein
<b>cdc2</b>	:	Cell cycle controller
<b>CDK4</b>	:	Cyclin Dependent Kinase 4
<b>CKIP-1</b>	:	Casein kinase 2-interacting protein-1
<b>cPKCs</b>	:	Conventional PKCs
<b>CREB</b>	:	cAMP response element binding protein
<b>CRE</b>	:	cAMP regulatory element
<b>CSMLO</b>	:	Mouse mammary adenocarcinoma cell line
<b>CT</b>	:	Computed tomography
<b>DAG</b>	:	Diacylglycerol
<b>DBD</b>	:	DNA-binding
<b>DCIS</b>	:	Ductal Carcinoma In Situ
<b>DEAE</b>	:	Diethyl amino ethanol
<b>DEPC</b>	:	Diethyl pyrocarbonate
<b>DPBS</b>	:	Dulbecco's phosphate buffer saline
<b>DMEM</b>	:	Dulbecco's Modified Eagle's Medium
<b>DMSO</b>	:	Dimethyl sulfoxide
<b>dNTPs</b>	:	Deoxynucleotide triphosphates
<b>DTT</b>	:	Dithiothreitol
<b>E<sub>2</sub></b>	:	Estradiol-17 $\beta$
<b>EDTA</b>	:	Ethylene diamine tetra acetic acid
<b>EGF</b>	:	Epidermal growth factor
<b>ER</b>	:	Estrogen receptor
<b>ERE</b>	:	Estrogen response element
<b>ER<math>\alpha</math></b>	:	Estrogen receptor $\alpha$
<b>Er<math>\beta</math></b>	:	Estrogen receptor $\beta$
<b>ERK</b>	:	Extracellular signal regulated kinases
<b>EtBr</b>	:	Ethidium bromide

<b>FBS</b>	:	Fetal bovine serum
<b>FNAC</b>	:	Fine needle aspiration and cytology
<b>FSH</b>	:	Follicle stimulating hormone
<b>Fo</b>	:	Forskolin
<b>GSK-3b</b>	:	Glycogen synthase kinase-3 beta
<b>GRIP-1</b>	:	Glutamate receptor interacting protein
<b>GPCR</b>	:	G protein-coupled receptor
<b>HRP</b>	:	Horseradish peroxidase
<b>IGF</b>	:	Insulin like growth factor
<b>IP3</b>	:	Inositol triphosphate
<b>INK4</b>	:	Inhibitory Kinase 4
<b>JDP1</b>	:	Jun dimerization protein 1
<b>JDP2</b>	:	Jun dimerization protein 2
<b>JNK</b>	:	Jun N terminal kinase
<b>KIP</b>	:	Kinase inhibitory protein
<b>LBD</b>	:	Ligand-binding
<b>LH</b>	:	Luteinizing hormone
<b>LNA</b>	:	Locked nucleic acid
<b>MAPK</b>	:	Mitogen activated protein kinase
<b>MAPKKK</b>	:	MAP kinase kinase kinase
<b>MCF-7</b>	:	Michigan cancer foundation 7
<b>MDA-MB</b>	:	M D Anderson metastatic breast
<b>MOPS</b>	:	3-(N-morpholino) propanesulfonic acid
<b>MTT</b>	:	3-(4, 5-dimethylthiazol- 2-yl)-2, 5-diphenyl tetrazolium bromide
<b>MMLV RT</b>	:	Maloney Murine Leukemia Virus Reverse Transcriptase
<b>nPKCs</b>	:	novel PKCs
<b>NR</b>	:	Nuclear receptor
<b>NRL</b>	:	Neural retina leucine zipper
<b>NFAT</b>	:	Nuclear factor of activated T cells
<b>NFkB</b>	:	Nuclear factor kappa beta
<b>PDE</b>	:	Phospho diesterase
<b>PIP2</b>	:	Phosphatidylinositol -4, 5-bisphosphate
<b>PKA</b>	:	Protein kinase A
<b>PKC</b>	:	Protein kinase C
<b>PKIB</b>	:	Protein kinase inhibitor B
<b>PLC</b>	:	Phospholipase C

<b>PMA</b>	:	Phorbol 12-myristate 13-acetate
<b>PMO</b>	:	Phosphoramidate morpholino oligomer
<b>PNA</b>	:	Peptide nucleic acid
<b>PVDF</b>	:	Poly-vinylidene-difluoride
<b>PR</b>	:	Progesterone receptor
<b>pRB</b>	:	Retinoblastoma protein
<b>q-RTPCR</b>	:	Quantitative reverse transcriptase polymerase chain reaction
<b>RPMI-1640</b>	:	Roswell Park Memorial Institute 1640
<b>SERMs</b>	:	Selective estrogen receptor modulators
<b>siRNA</b>	:	Short-interfering ribonucleic acid
<b>SP-1</b>	:	Specificity protein-1
<b>SRE</b>	:	Serum response element
<b>TGF<math>\alpha</math></b>	:	Transforming growth factor $\alpha$
<b>TPA</b>	:	12- o-tetradecanoyl phorbol-13-acetate
<b>TRE</b>	:	TPA responsive element
<b>TMX</b>	:	Tamoxifen