

Biological Studies Based On Signal Transduction By c-erbB-2 Gene Product

Thesis

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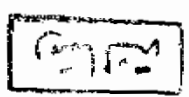
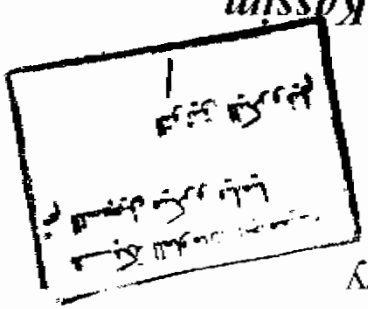
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To

My

Parents

for his ideal guidance and motivation.

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List Of Abbreviations

μ M	: micromolar
ATP	: Adenosine triphosphate
bp	: Base pairs
BSA	: Bovine serum albumin
cAMP	: Cyclic adenosine monophosphate
cDNA	: complementary DNA
CPM	: Counts per minute
CTP	: Cytidine triphosphate
DAG	: Diacylglycerol
DCC	: deleted in colon cancer gene
ddNTP	: 2',3'-Dideoxynucleotide triphosphate
DEPC	: diethylpyrocarbonate
DLAR	: <i>Drosophila</i> leukocyto common antigen related protein
DMBA	: Dimethylbenzathracene
DMEM	: Dulbecco's minimal essential medium
DNA	: Deoxy ribonucleic acid
dNTP	: Deoxynucleotide triphosphate
dope	: dioleolyphosphatidylethanolamine
DOSPA	: 2,3-dioleyloxy-N-[2(sperminecarboxamido)ethyl]-N,N-dimethyl-1-propanaminiumtrifluoroacetate
DTT	: Dithiothreitol
EDTA	: Ethylene diamine tetraacetic acid
EGF	: Epidermal growth factor
EGFR	: Epidermal growth factor receptor
ER	: Endoplasmic reticulum
FBS	: Fetal bovine serum
FGF	: Fibroblast growth factor
FN-III	: Fibronectin III
GDP	: Guanidine diphosphate
GTP	: Guanidinene triphosphate
GTPase	: Guanosine triphosphatase
HGF	: Hepatocyte growth factor
HPTP	: Human proteintyrosine phosphatase
Ig	: Immunoglobulin
IGF	: Insulin like growth factor
IL	: Interleukin
kDa	: Kilodalton
LAR	: Leukocyte common antigen related protein
LB	: Luria broth
LCA	: Leukocyte common antigen
LOH	: Loss of heterozygosity
MAb	: Monoclonal antibody

MCS	: multiple cloning site
mCSF	: Macrophage colony stimulating factor
mCSFR	: Macrophage colony stimulating factor receptor
MEME	: Eagle's minimal essential medium
MGF	: Mast cell growth factor
milli Q	: distilled deionized water
mM	: Millimolar
MMLV	: Moloney murine leukemia virus
mRNA	: Messenger RNA
N-CAM	: Neural cell adhesion molecule
NIH3-18	: National Institute Of Health 3-18 cells
NIH3T3	: National Institute Of Health 3T3 cells
OD	: Optical density
PBS	: Phosphate buffered saline
PDGFR	: Platelet derived growth factor receptor
PKC	: Protein kinase-C
PMA	: phorbol 12-myristate 13-acetate
PSTP	: Protein serine threonine phosphatase
PTK	: Protein tyrosine kinase
PTP	: Protein tyrosine phosphatase
Rb	: Retinoplastoma <i>Retinoblastoma</i>
RNA	: Ribonucleic acid
RPA	: RNAase protection assay
RT/PCR	: Reverse transcriptase polymerase chain reaction
RTK	: Receptor tyrosine kinase
SDS	: Sodium dodecyl sulphate
SH2	: Src homology 2
TA	: Tris acetate buffer
TBE	: Tris borate buffer
TC-PTP	: T-cell protein tyrosine phosphatase
TE	: Tris EDTA buffer
TEMED	: N,N,N',N'-tetramethylethylenediamine
TGF	: Transforming growth factor
TNF	: Tumor necrosis factor
UTP	: Uridine triphosphate
w/w	: Weight per weight



The Standard Genetic Code

UUU	Phe	UCU	Ser	UAU	Tyr	UGU	Cys
UUC	Phe	UCC	Ser	UAC	Tyr	UGC	Cys
UUA	Leu	UCA	Ser	UAA	Stop	UGA	Stop
UUG	Leu	UCG	Ser	UAG	Stop	UGG	Trp
CUU	Leu	CCU	Pro	CAU	His	CGU	Arg
CUC	Leu	CCC	Pro	CAC	His	CGC	Arg
CUA	Leu	CCA	Pro	CAA	Gln	CGA	Arg
CUG	Leu	CCG	Pro	CAG	Gln	CGG	Arg
AUU	Ile	ACU	Thr	AAU	Asn	AGU	Ser
AUC	Ile	ACC	Thr	AAC	Asn	AGC	Ser
AUA	Ile	ACA	Thr	AAA	Lys	AGA	Arg
AUG	Met	ACG	Thr	AAG	Lys	AGG	Arg
GUU	Val	GCU	Ala	GAU	Asp	GGU	Gly
GUC	Val	GCC	Ala	GAC	Asp	GGC	Gly
GUA	Val	GCA	Ala	GAA	Glu	GGA	Gly
GUG	Val	GCG	Ala	GAG	Glu	GGG	Gly

Symbols For Amino Acids

A	Ala	Alanine	M	Met	Methionine
B	Asx	Asparagine or aspartic	N	Asn	Asparagine
C	Cys	Cysteine	P	Pro	Proline
D	Asp	Aspartic acid	Q	Gln	Glutamine
E	Glu	Glutamic acid	R	Arg	Arginine
F	Phe	Phenylalanine	S	Ser	Serine
G	Gly	Glycine	T	Thr	Threonine
H	His	Histidine	V	Val	Valine
I	Ile	Isoleucine	W	Trp	Tryptophan
K	Lys	Lysine	Y	Tyr	Tyrosine
L	Leu	Leucine	Z	Glx	Glutamine or glutamic



List Of Corrections

<u>Page no.</u>	<u>Line no.</u>	<u>Wrong</u>	<u>Correction</u>
2, 19	17, 16	receptor	receptors
2, 19	17, 17	is	are
5, 8	17, 10	c-erbB-2	c- <u>erb</u> B-2
6	13	is	are
6	14	suggests	suggest
6	15	have	having
10	17	cell	----
18	19	methlation	methylation
18	19	k-ras	ki- <i>ras</i>
23	5	activitied	activities
23	5	receptorsd	receptors
29	: Paragraphs 1 & 2 should be a single paragraph.		
34	19	b2-microglobulin	β 2-microglobulin
44	3	in60%	in 60%
45	6	of p185	p185
46	6	p170 ^{EGFr}	p170 ^{EGFR}
46	: Paragraphs 1 & 2 should be a single paragraph, no further.		
56	9	septamer	heptamer
58	4	New	Neu
64	1	Tris-buffered	Tris-buffered phenol
72	2	APS	ammonium persulfate
72	7	single stranded	double stranded
76	2	lane 1	lane 3
76	4	lane 3	lane 1
77	2	right	left
77	3	200, 600	224, 702
77	3	a lane is	"a" arrow points to
77	4	b	"b" arrow points to
137	5, 6	separate lines	one line
151	8	positive slides	malignant slides
151	repeated	forty three (43)	forty five (45)
166	21	<i>Hunter t</i>	<i>Hunter</i>
166	24	<i>Brautigan DL</i>	<i>Brautigan</i>
166	: Add the references (<i>Cantly et al, 1991; Hunter et al, 1991; Rodriguez et al, 1991; and Tyson et al, 1991</i>) respectively to paragraphs 1 & 2.		
172	18	<i>wiener</i>	<i>Wiener</i>



Introduction