

V Abbreviations

Ab:	antibody
A ₂₆₀ :	absorbance at 260nm
A ₂₈₀ :	absorbance at 280nm
Abs:	Absorption
Amp:	ampicilline
AP:	alkaline phosphates
ATP:	adenosine triphosphate
BCCP:	biotin carboxyl carrier protein
BirA:	biotin holoenzyme synthetase
BPL:	biotin protein ligase
Bp:	base pair
BSA:	bovine serum albumin
cDNA:	complementary DNA
cGMP:	cyclic guanosine-3', 5'-monophosphate
COS-1 cells:	african green monkey kidney fibroblast-like cells transformed with SV 40 T antigen
cmc:	critical micellar concentration
Cys:	cysteine
Da:	Dalton
DMEM	Dulbecco's Modified Eagle Medium
DMSO:	dimethyl sulfoxide
DNA:	deoxyribonucleic acid
dNTP:	2'-deoxynucleotide-5'-triphosphate
DTT:	dithiothreitol
EB	ethidium bromide
EPC:	egg phosphatidyl choline
EDTA:	ethylenediaminetetraacetic acid
Fw:	forward
FCS:	fetal calf serum
FPLC:	fast protein liquid chromatography
G α :	α subunit of G protein
G β :	β subunit of G protein
G γ :	γ subunit of G protein
Gt, Gq, Gs, Gi etc. :	G protein heterotrimers of the respective class
Gt α , Gt $\beta\gamma$:	α - and $\beta\gamma$ - subunit of transducin
G _{t,memb} , G _{t,sol} :	membrane-bound transducin and soluble transducin
GPCR:	G-protein coupled receptors
GFP	green fluorescent protein
G:	guanine
Gln:	glutamine
Glu:	glutamate
Gly:	glycine
GST	glutathione S-transferase

GTP:	guanosine triphosphate
HEPES	4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid
IPTG:	isopropylthio- β -D-galactoside
kb:	kilo base
kDa:	kilo Dalton
LB:	Luria Bertani
Lys:	lysine
M:	molar (mol/ l)
Meta I:	metarhodopsin I
Meta II:	metarhodopsin II
mRNA:	message RNA
NIR:	near-infrared
OD:	optical density
ORF:	open reading frame
PAGE:	polyacrylamide electrophoresis
PBS:	phosphate buffer saline
PCR:	polymerase chain reaction
PDE:	phosphodiesterase
pH:	negative log of hydrogen ion concentration
Rev:	reverse
Rho:	rhodopsin
R*:	photoactivated rhodopsin
ROS:	rod outer segments
RM:	resonant mirror
RNA:	ribonucleic acid
RNase:	ribonuclease
RT:	room temperature
SAM:	self-assembled monolayer
SLB:	supported lipid bilayers
SPR:	surface plasmon resonance
SDS:	sodium dodecyl sulfate
Ser:	serine
SV 40:	simian virus 40
TAE:	tris acetate EDTA
TBS:	tris buffered saline
TE:	tris EDTA
Trp:	tryptophan
UV:	ultraviolet light
X-gal:	5-bromo-4-chloro-3-indolyl- β -D-galactopyranoside
λ_{\max} :	maximum of absorption (nm)
