

## ABBREVIATIONS

A = Absorbance

amp = Ampicillin

APS = Ammonium persulfate

ASA = Aspartate-  $\beta$ - semialdehyde

asd /ASD = Aspartate-  $\beta$ - semialdehyde dehydrogenase

BCIP = 5-Bromo, 4-chloro, 3-indolylphosphate

BLAST = Basic Local Alignment Search Tool

BSA = Bovine serum albumin

CHES = N-cyclohexyl-2-aminoethanesulfonic acid

cm = Centimeter

CTAB = Cethyl trimethyl ammonium bromide

DAP = Diaminopimelic acid

DMSO = Dimethylsulfoxide

DNA = Deoxyribonucleic acid

DTT = Dithiothreitol

*E. coli* = *Escherichia coli*

EDTA = Ethylenediaminetetraacetic acid

g = Gravitational constant

gm = Gram

h = Hour

IPTG = Isopropyl-  $\beta$ -D- thiogalactopyranoside

kb = Kilo base pairs

$K_{cat}$  = Turnover number

kDa = Kilodaltons

km = Kanamycin

$K_m$  = Michaelis-Menten constant

KPB = Potassium phosphate buffer

L = Liter

LB = Luria-Bertani

LJ = Lowenstein Jensen  
m = Moles  
M = Molar  
mg = Milligrams  
min = Minutes  
ml = Milliliter  
*M. tb* = *Mycobacterium tuberculosis*  
NADP = Nicotinamide adenine dinucleotide (oxidized)  
NBT = Nitroblue tetrazolium  
NCBI = National Centre for Biotechnology Information  
Ni-NTA = Nickel nitrilotriacetic acid  
nm = Nanometer  
O.D = Optical density  
ORF = Open reading frame  
PAGE = Polyacrylamide gel electrophoresis  
PBS = Phosphate buffered saline  
PCR = Polymerase chain reaction  
Pi = Inorganic phosphate  
pI = Isoelectric point  
pmol = Picomoles  
PMSF = Phenyl methyl sulfonyl fluoride  
rpm = Revolutions per minute  
SDS = Sodium dodecyl sulfate  
sec = Seconds  
sp. = Species  
TB = Tuberculosis  
TBE = Tris-borate EDTA  
TE = Tris EDTA  
TEMED = Tetramethylethylenediamine  
U = Units  
UV = Ultraviolet

V = Voltage

$V_{\max}$  = Maximal velocity

w/v = Weight by volume

X-gal = 5-bromo, 4-chloro, 3-indoyl  $\beta$ -D-galactoside

% = Percent

$\mu\text{mol}$  = Micromoles

$\mu\text{M}$  = Micromolar

$\mu\text{l}$  = Microliters

$\text{\AA}$  = Angstrom

$\alpha$  = Alpha

$\beta$  = Beta

$^{\circ}\text{C}$  = Degrees Celsius