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#### ABBREVIATIONS AND SYMBOLS

 $\alpha$  Alpha

β Beta

δ Delta

ε Epsilon

γ Gamma

Alanine gamma

Glycine gamma

ψ Pseudogene

θ Theta

Zeta

Ab Antibody

ACC Acetyl-CoA carboxylase

AHSP Alpha hemoglobin stabilizing protein

BCCP Biotin carboxyl carrier protein

BHS Holoenzyme synthetase

BSA Bovine serum albumin

°C Degree Celsius

CBC Complete blood count

CD Cluster of Differentiation

cDNA Complementary deoxyribonucleic acid

DMSO Dimethyl sulfoxide

DNA Deoxyribonucleic acid

EDTA Ethylenediaminetetracetic acid

ELISA Enzyme-linked immunosorbent assay

EtBr Ethidium bromide

FCS Fetal calf serum

FITC Fluorescein isothiocyanate

g Gram

GST Glutathione-S-transferase

HAT Hypoxanthine aminopterine and thymidine

HbA Hemoglobin A

HbA<sub>2</sub> Hemoglobin A<sub>2</sub>

HbF Hemoglobin F

HGPRT Hypoxanthine guanine phosphoribosyltransferase

hr Hour

HRP Horseradish peroxidase

IgA Immunoglobulin A

IgG Immunoglobulin G

IgG2b Immunoglobulin G2b

IgM Immunoglobulin M

Igs Immunoglobulins

IMDM Iscove's Modified Dulbecco's Medium

kb Kilobase

kDa Kilo Dalton

L Litre

M Molarity

mAb Monoclonal antibody

MBP Maltose-binding protein

mg Milligram

min Minute

ml Milliliter

mM Millimolar

NaN<sub>3</sub> Sodium azide

nm Nanometer

O.D. Optical Density

PBS Phosphate buffer saline

% Percent

pH Power of hydrogen

rpm Round per minute

SDS-PAGE Sodium dodecyl sulfate polyacrylamide gel

electrophoresis

μg Microgram

ul Microliter

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