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### ABBREVIATIONS AND SYMBOLS

α alpha

β beta

bp base pairs

BSA bovine serum albumin

CBC complete blood count

<sup>0</sup>C degree celsius

 $\delta$  codon delta

dNTPs deoxynuclotide triphosphates

DNA deoxyribonucleic acid

DW distilled water

ε epsilon

EDTA ethylenediamine tetraacetic acid

EP erythrocyte porphyrin

γ gamma

Hb hemoglobin

HbCS hemoglobin Constant Spring

HbE hemoglobin E
HbF hemoglobin F

HH hereditary hemochromatosis

HPLC high performance liquid

chromatography

IVS intervening sequence

Kb kilobase

KCl potassium chloride

LIC liver iron concentration

LCR locus control regiion magnesium chloride  $MgCl_2$  $\mu l$ microlitre micromolar  $\mu M$ ml millilitre millimolar mMminute min nanogram ng NSS normal saline solution optical density OD % percent **PCR** polymerase chain reaction Ψ pseudo θ theta SI serum iron TIBC total iron binding capacity TS transferrin saturation UTR untranslated region zeta **ZPP** zinc protoporphyrin