

Beta-Globin Gene Haplotypes in Manipur, North-east India

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ABSTRACT A sample of 204 individuals belonging to five different population units of Manipur, viz. the Meitei, Gangte, Thadou, other Kuki, and Kabui has been analyzed for beta globin gene cluster, considering seven loci to bring out a first hand information on haplotype frequencies of beta globin in the state. A common trend of allelic frequencies observed in the present data are the high frequencies of HindIII ϵ , AvaII β and HinfI β and relatively low frequencies of HindIII γ , HindIII δ , HindIII ψ β and HindIII ψ β . The frequency of Framework 1 (presence of both AvaII β and HinfI β sites) ranges from nil to 17.65% in the present data of Manipur. The frequency of Framework 2 ranges from 33% to 66% and that of Framework 3 from 33% to 55%. One noteworthy observation is the association of Hb β EE exclusively with Framework 2, which suggests a similar mutational origin of HbE in South-east Asia and North-east India. Only five beta globin haplotypes are found in the present data. Haplotypes +—+ and +—+—, the most common in Japanese, Cambodians, Koreans, South Chinese, Samoans and Thais, are the most frequent haplotypes in Manipur too.