Test of substitution saturation (Xia et al. 2003; Xia and Lemey 2009) Testing whether the observed Iss is significantly lower than Iss.c. Part I. For a symmetrical tree. ______ Prop. invar. sites 0.0000 0.5265 Mean H Standard Error 0.0213 1.8458 Hmax 0.2853 lss lss.c 0.7928 Т 23.8798 DF 1913 Prob (Two-tailed) 0.0000 95% Lower Limit 0.2436 95% Upper Limit 0.3270 ______ Part II. For an extreme asymmetrical (and generally very unlikely) tree. ______ lss.c 0.6031 Т 14.9543 DF 1913 Prob (Two-tailed) 0.0000 95% Lower Limit 0.2436 95% Upper Limit 0.3270 ______

Interpretation of results:

Significant Difference

Yes No

lss < lss.c Little Substantial

saturation saturation

lss > lss.c Useless Very poor

sequences for phylogenetics

Please cite:

Xia, X., Z. Xie, M. Salemi, L. Chen, Y. Wang. 2003. An index of substitution saturation and its application. Molecular Phylogenetics and Evolution 26:1-7.

Xia, X. and Lemey, P. 2009. Assessing substitution saturation with DAMBE. Pp. 615-630 in Philippe Lemey, Marco Salemi and Anne-Mieke Vandamme, eds. The Phylogenetic Handbook: A Practical Approach to DNA and Protein Phylogeny. 2nd edition Cambridge University Press.