

**TABLE S6****The average nucleotide divergence ( $D$ ) and  $o/e_{6N}$  in four comparisons of eukaryote genomes**

	conserved level	CDS length(bp)	CDS number	D spectrum	D average	$o/e(6N)$	Frequency of $6N(\times 10^{-3})$
<i>S. cerevisiae</i>	highly	1293144	1019	0 ~ 0.099	0.078	0.727	1.984
	moderately	1294212	808	0.099 ~ 0.119	0.109	0.808	2.79
	less	1293987	1020	0.119 ~ 0.447	0.155	0.851	3.442
<i>D. melanogaster</i>	highly	1205748	730	0.005 ~ 0.066	0.051	0.368	0.438
	moderately	1209369	658	0.066 ~ 0.089	0.077	0.399	0.471
	less	1207668	939	0.089 ~ 0.646	0.14	0.591	0.956
<i>C. elegans</i>	highly	2923812	2541	0.013 ~ 0.227	0.181	0.509	0.946
	moderately	2924169	2302	0.227 ~ 0.286	0.255	0.533	1.423
	less	2923314	2674	0.286 ~ 0.665	0.36	0.581	1.931
<i>H. sapiens</i>	highly	8411730	4986	0.015 ~ 0.131	0.101	0.532	1.41
	moderately	8412294	4612	0.131 ~ 0.186	0.157	0.519	1.341
	less	8413053	5722	0.186 ~ 0.677	0.266	0.547	1.409