

Table 2. Partial rank correlation of various factors and d_N , d_S or d_N/d_S .

	d_N		d_S		d_N/d_S	
	ρ	P -value	ρ	P -value	ρ	P -value
Essentiality						
Essentiality $\tau \cdot ExpLev$	-0.17592	7.56E-17	-0.10304	1.18E-06	-0.15281	4.89E-13
Essentiality UTR · Intron	-0.18822	4.20E-19	-0.10722	4.26E-07	-0.16484	5.94E-15
Expression pattern						
τ Essentiality	0.15373	3.52E-13	0.09374	9.96E-06	0.13744	8.35E-11
τ UTR · Intron	0.13744	8.35E-11	0.09611	5.89E-06	0.12003	1.47E-08
$ExpLev$ Essentiality	-0.04331	4.16E-02	0.02015	3.43E-01	-0.04736	2.59E-02
$ExpLev$ UTR-Intron	-0.05249	1.35E-02	0.01707	4.22E-01	-0.05668	7.64E-03
Gene compactness						
UTR length $\tau \cdot ExpLev$	-0.18377	2.87E-18	-0.03664	8.48E-02	-0.17940	1.81E-17
5'-UTR length $\tau \cdot ExpLev$	-0.12785	1.56E-09	-0.03777	7.56E-02	-0.12640	2.40E-09
3'-UTR length $\tau \cdot ExpLev$	-0.16575	4.19E-15	-0.02414	2.56E-01	-0.16229	1.55E-14
UTR length Essentiality	-0.20318	4.66E-22	-0.04713	2.66E-02	-0.19681	9.04E-21
5'-UTR length Essentiality	-0.12808	1.47E-09	-0.03710	8.09E-02	-0.12670	2.20E-09
3'-UTR length Essentiality	-0.18386	2.77E-18	-0.03342	1.16E-01	-0.17863	2.48E-17
Intron length (avg) $\tau \cdot ExpLev$	-0.11321	9.25E-08	0.02248	2.90E-01	-0.12949	9.65E-10
Intron length (avg) Essentiality	-0.12422	4.51E-09	0.01350	5.26E-01	-0.13860	5.77E-11

Note-Essentiality is 1 for essential genes and 0 for non-essential genes. “UTR” for UTR length and “Intron” for average intron length. The factor before “|” is the factor being examined and those after “|” are the factors being controlled for. P -values show the probabilities of the observations under the hypothesis of no correlation. The analysis is based on 2,214 mouse genes and their rat orthologs.