Supplementary Material and Methods

1. PCR strategy to estimate TE frequencies

Two pairs of primers were designed for each TE insertion: one set of primers was intended to assay for the presence of the TE insertion and consists of a ‘‘Left’’ (L) primer which lay within the TE sequence and a ‘‘Right’’ (R) primer that lay in the flanking region to the right of the TE insertion. We expect this PCR to give a band (~500bp) only when the element is present. The other set of primers was intended to assay for the absence of the TE insertion and consisted of a ‘‘Flank’’ (FL) primer, which lay in the left flanking region of the TE sequence and the R primer mentioned above. In this case, the absence of a TE in the pool should give a shorter (~500bp), ‘‘absence’’ band, and the presence of a TE should give a longer, ‘‘presence’’ band. We assumed that the presence band is unlikely to be amplified if the TE sequence is longer than 800 bp. In this case the presence band would be too long (~1.3kb) to be amplified with the PCR conditions that we used (see González et al. 2008)

2. Updating results to the Release 5 of the *D. melanogaster genome*

We developed a pipeline that allowed us to check that the two pairs of primers previously designed to check for the presence and the absence of TEs were still informative (González et al. 2008). This pipeline contains the FastaGrep program that maps the primers onto the genomic sequence (available from http://bioinfo.ebc.ee/download/ and executed with the default parameters) and several *Python* parser programs. These programs check the orientation of the primers, the size of the expected PCR products and also verify the density of repeats along the flanking

regions of each TE. Only TEs for which the repeat coverage of the flanking regions is equal to zero or for which only INE-1 elements are located in these regions, were selected. After eliminating the TEs for which primers were not longer informative, we further eliminated TEs for which primer pairs did not give a mutually consistent result in the NA pools (40 TEs) and 13 TEs that were previously identified as putatively adaptive (Aminetzach et al. 2005; González et al. 2008; 2009b) ending with a dataset of 755 TEs.

3. Error of the TE frequency estimates using the pooled-PCR approach

Because many TEs in *D. melanogaster* are known to be at low population frequencies (Charlesworth and Langley 1989; Charlesworth et al. 1994) and because for many downstream analyses the precise frequencies of TEs at an intermediate frequency (*e.g.* 30% *vs* 80%) do not affect conclusions to the same extent as the more precise measurement of the lower frequencies (*e.g.* 1% *vs* 10%), we used a pooled-PCR approach to estimate individual TE frequencies (González et al. 2008). In addition, this procedure allowed us to interrogate a much deeper population sample.

This pooled-PCR procedure can lead to misclassification of the TE status. This should not be a problem for the TEs that are truly absent or fixed in the pool. TEs that are truly absent are unlikely to generate a band of the predicted length corresponding to the presence of the TE in the L-R PCR. Similarly, TEs that are truly fixed are very unlikely to generate a band of the predicted length corresponding to the absence of the TE in the FL-R PCR. On the other hand, it is entirely possible to erroneously classify a polymorphic TE as either absent or fixed in a pool. Specifically, we can misclassify a polymorphic TE as absent when the L-R primer fails to produce a product and when the

FL-R pair produces only the band corresponding to the absence of the element. We assume that the failures of FL-R and L-R primers to generate the TE presence bands are independent of each other because the success of the FL-R absence band amplification indicates that the primer common for the two reactions (the R primer) works well. To estimate the probability that the L-R pair fails to generate a product when the TE is indeed present in the pool, we calculate e_1 as follows:

e_1 = Pr [an element polymorphic in a pool is misclassified as absent]

= Pr [both the L-R and the FL-R presence bands fail | the element is polymorphic in a pool and the FL-R absence band does not fail].

Using the assumption of independence of the failures of FL-R and L-R primers to generate the TE presence bands, we get the following:

$e_1 = e_{LR,p} \times e_{FLR,p}$ = Pr [the L-R presence band fails | the element is polymorphic in a pool] x Pr [the FL-R presence band fails | the element is polymorphic in a pool].

To ascertain that the element is polymorphic for the purposes of calculating the L-R presence band error rate, we sample from elements that have both the absence and the presence bands in the FL-R PCR results. Conversely, to ascertain that the TE is polymorphic in calculating the FL-R presence band error rate, we sample from elements that have the L-R presence band (as well as the FL-R absence band). Thus, we obtain the following:

$e_1 = e_{LR,p} \times e_{FLR,p}$ = Pr [the L-R presence band fails | FL-R PCR gives both absence and presence bands] x Pr [the FL-R presence band fails | FL-R PCR gives an absence band, and L-R PCR gives a presence band].

We assess the proportion of cases in which the FL-R pair indicates a presence of

the TE (1006 cases) while the L-R primer fails (41 cases). The L-R PCR failure rate is thus 4.07% (95% confidence intervals: 3% - 5.5%). We determined the FL-R presence band error rate by estimating the proportion of cases in which the L-R pair indicates the presence of the TE and the FL-R pair indicates that the TE is absent in some strains (688 cases), while the FL-R pair fails to generate a presence band (545 cases). The FL-R error rate is thus 79.22% (95% confidence intervals: 76% - 82.15%). It is not unexpected that it is so high because the FL-R presence band should fail for most moderately long TEs. The total rate of misclassification of polymorphic TEs as absent is the product of the two error rates and is estimated at approximately 3.23%.

In some cases a polymorphic TE can be misclassified as fixed. This is not very likely to happen for short (<500 bp) TEs because such TEs would only be misclassified as fixed if the FL-R primer pair generates the presence band and fails to generate the absence band. Given that PCR is much more efficient for shorter bands, this is not very likely. For longer TEs such a misclassification is certainly possible. The rate of failure of FL-R pair to generate an absence band can be estimated by e_2 as follows:

e_2 = Pr [an element polymorphic in a pool is missclassified as fixed]

= Pr [the FL-R absence band fails | the element is polymorphic in a pool and the element would be annotated as fixed if the FL-R absence band were to fail].

In the above expression, the element could be missclassified as fixed when there is a FL-R presence band and the L-R PCR reaction does yield a presence band. We now assume that when an element is polymorphic in a pool, we never get a presence band alone in FL-R PCR, since the absence band is easier to amplify. Accordingly, we get:

e_2 = Pr [FL-R absence band fails and the L-R PCR reaction yields a presence band | the

element is polymorphic in the pool]

We further make the assumption that the rate of failure of the FL-R absence band among the elements that show absence in the L-R PCR is the same as that among all the elements that are polymorphic (641 TEs). This has the potential of overestimating the error, since about 2.5 % (16/641) of the elements with the absence result in L-R PCR may be fixed, and thus are not even supposed to show the FL-R absence band. At the same time, this procedure might underestimate the error a bit, because it may be easier to amplify the absence band in the elements that are entirely absent from pools than in truly polymorphic elements.

The rate of failure of FL-R pair to generate an absence band can be estimated as the proportion of cases in which the L-R pair produces no band in the experiment while it does produce a presence band in the control pool (3428 cases), while the FL-R pair generates no band (35 cases). The overall error rate is thus 1.02% (95% confidence interval 0.72%-1.43%). Note that this is an overestimate because in some cases the FL-R absence band failure is because the TE is in fact fixed in the pool but the PCR with the L-R pair has failed. On the other hand, this procedure might underestimate the error as PCR with the FL-R primer pair might work more efficiently in cases where the TE is entirely absent from the pool.

4. Estimation of euclidean distances

We first determined the weight of the TE length (L) and the recombination rate (R) in the euclidean distance to minimize the squared frequency difference between the given TE ($TE_1 = TE_{focal}$) and the closest TE ($TE_2 = TE_{same}$ or TE_{diff}) such as:

$$d(TE_1,TE_2) = (\Sigma (k_i . (i_{TE1}-i_{TE2})^2 / i_{max}^2))^{1/2}$$

where k_i is the weight of the parameter i (recombination rate or TE length) and $\Sigma (k_i) = 1$.

For this analysis, we focused on the 637 polymorphic TEs. We obtained result for 631 TEs. For the other six TEs, it was impossible to detect the closest TE_{same} with a distance equal or greater than the distance calculated for the closest TE_{diff}. We numerically estimated by simulation that at $k_R = 0.994$ and $k_L = 0.006$ the average euclidean distance is minimal for two random TEs from our dataset and thus the used distance between the given TE (TE_1) and the closest TE (TE_2) is given by:

$$d(TE_1,TE_2) = ((0.994. (R_{TE1}-R_{TE2})^2 / R^2_{max}) + (0.006. (L_{TE1}-L_{TE2})^2 / L^2_{max}))^{1/2}$$

REFERENCES

Aminetzach, YT, Macpherson, JM, Petrov, DA. 2005. Pesticide resistance via transposition-mediated adaptive gene truncation in Drosophila. Science 309: 764-767.

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Charlesworth, B, Sniegowski, P, Stephan, W. 1994. The evolutionary dynamics of repetitive DNA in eukaryotes. Nature 371:215-220.

González, J, Lenkov, K, Lipatov, M, Macpherson, JM, Petrov, DA. 2008. High rate of recent transposable element-induced adaptation in Drosophila melanogaster. PLoS Biol 6:e251.

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melanogaster. Mol Biol Evol 26: 1949.

Figure S1. Comparison of the TE frequency estimates using pooled-PCR and single-strain PCR approaches. The plot represents the distribution of the NA frequencies for the 57 TEs estimated by Petrov et al. (2003) using single-strain PCR. Different colors indicate the estimated frequencies based on the pooled-PCR approach.

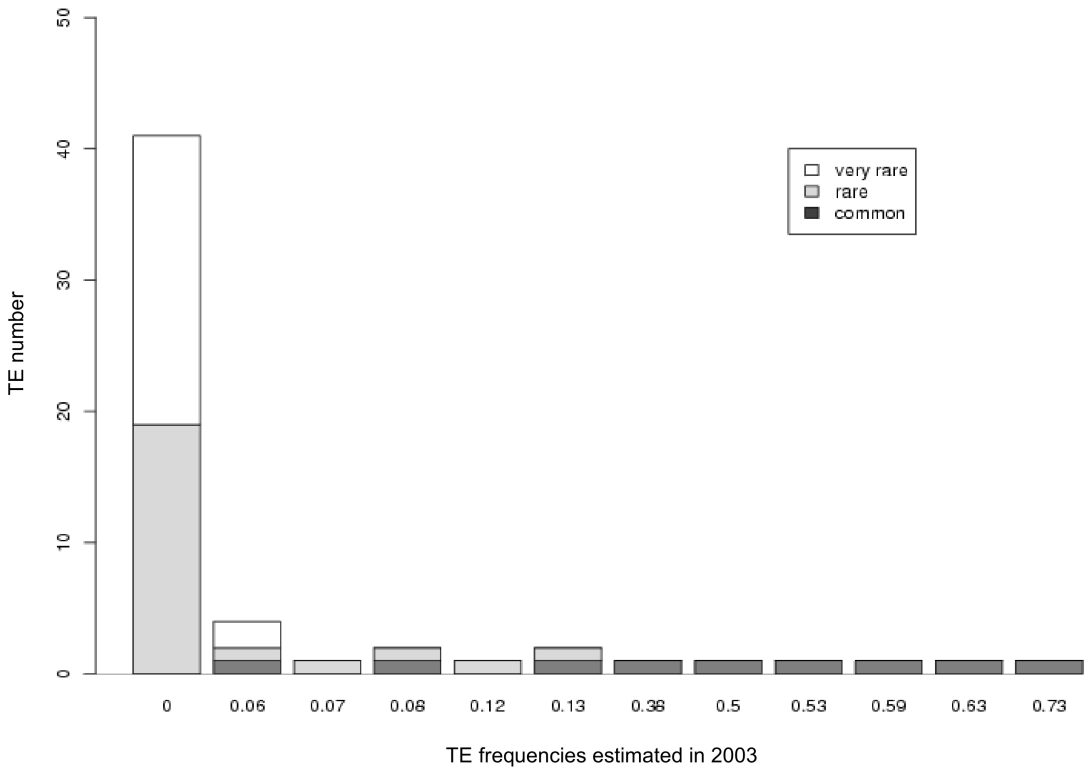


Figure S2. (A) TE frequency distribution by chromosomal arm.(B) Mean TE frequency by family on the X chromosome *versus* the autosomes.

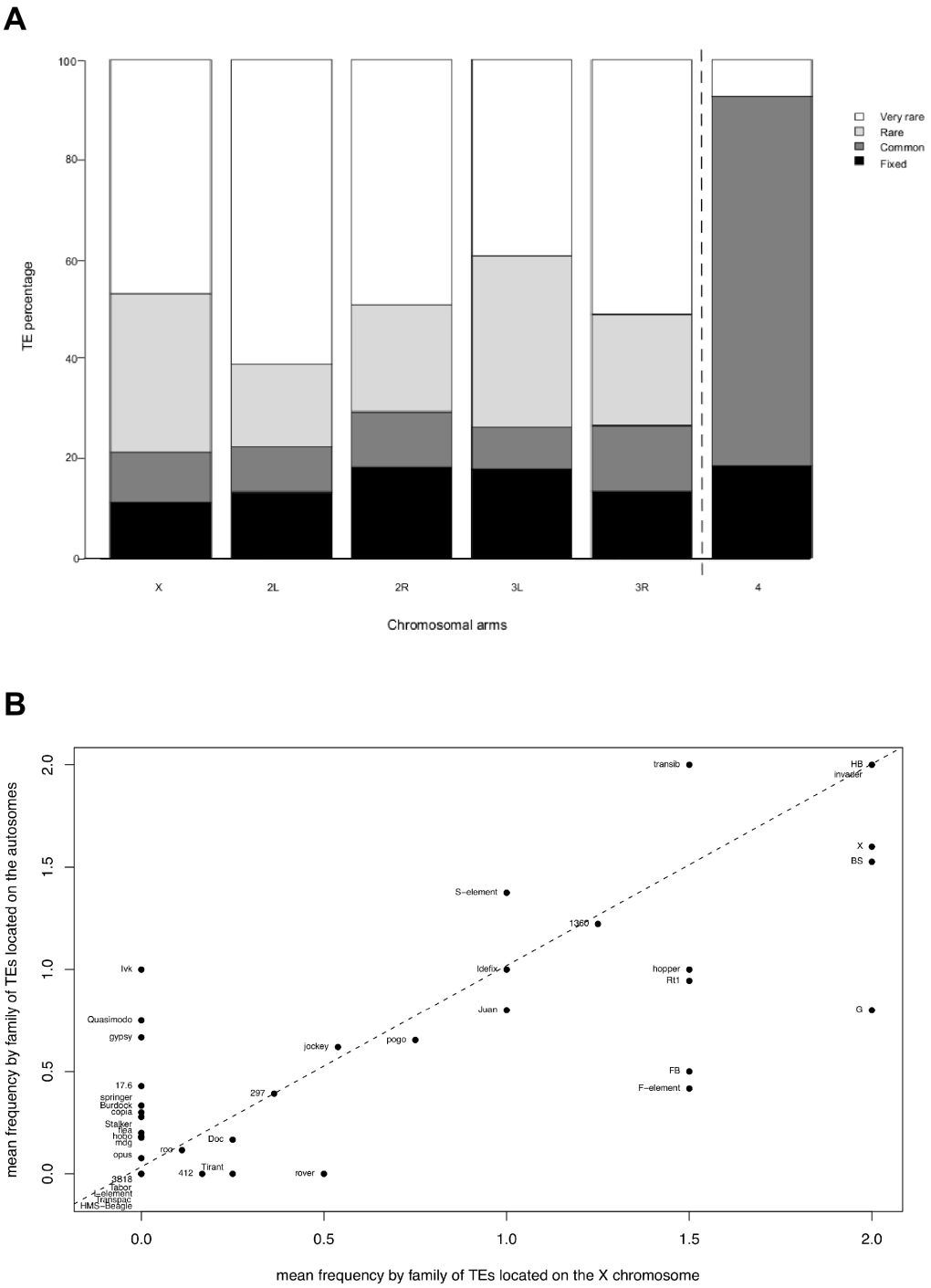
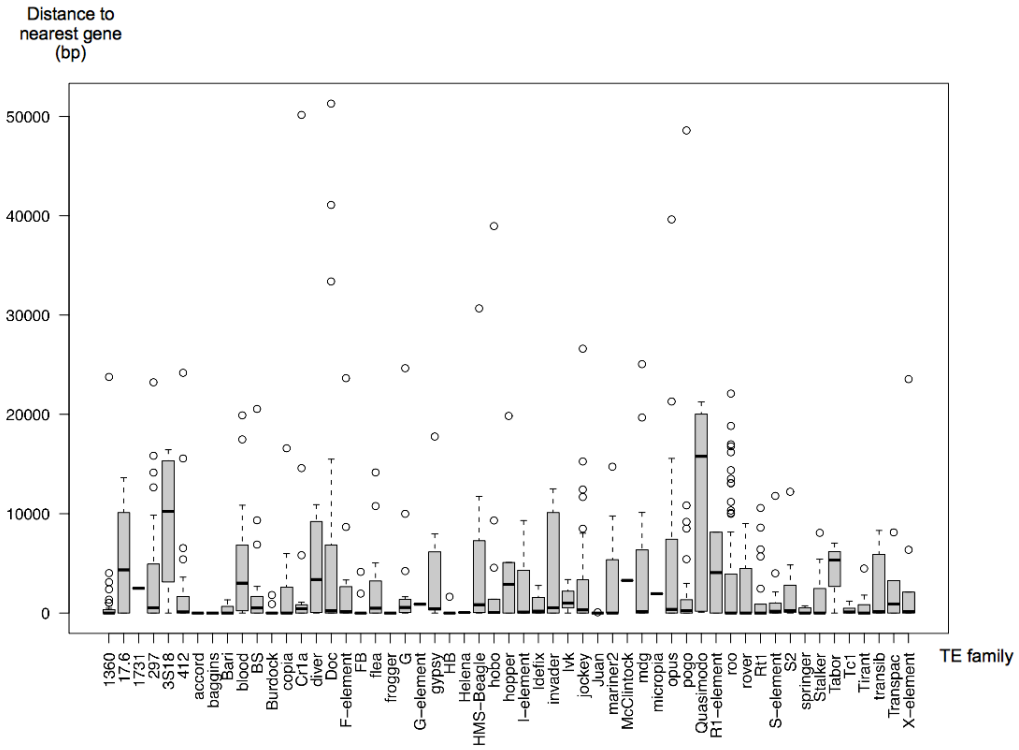


Figure S3. For each one of the 55 families analyzed in this work, we plot the distribution of the distances to the nearest gene of each one of the TEs in that particular family. Figure (A) shows the box-plots for all the TEs in each family and Figure (B) shows the box-plots only for the TEs classified as very rare within each family.

A



B

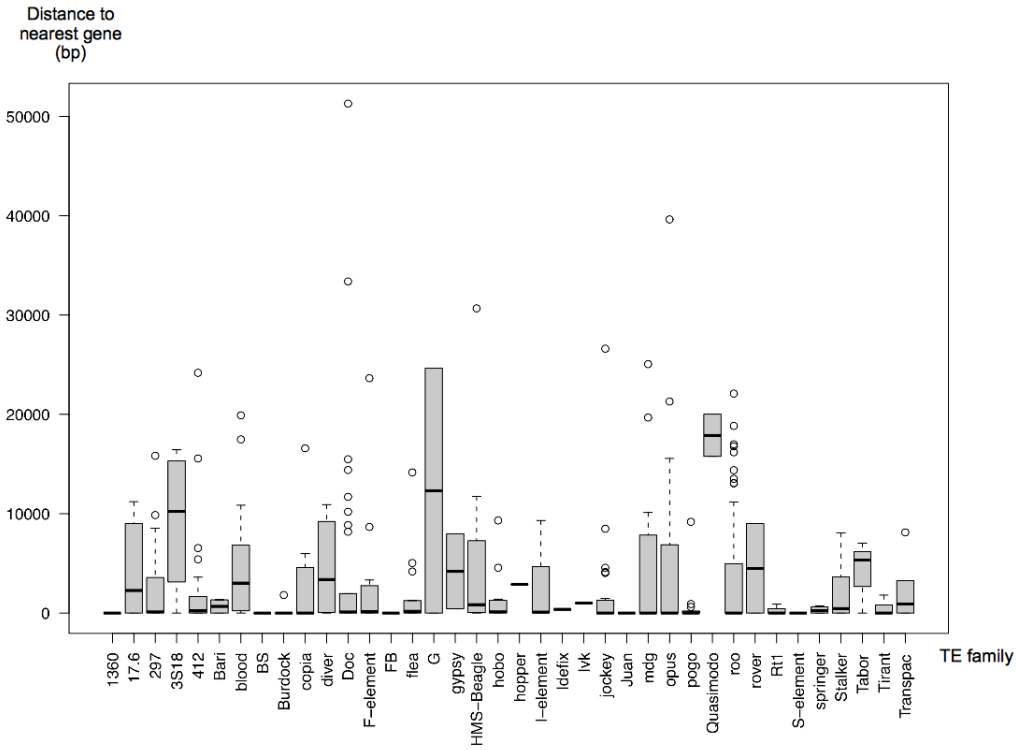

Distance to nearest gene (bp)
50000
40000
30000
20000
10000
0
1360
17.6
297
3S18
412
Bari
blood
BS
Burdock
copia
diver
Doc
F−element
FB
flea
G
gypsy
HMS−Beagle
hobo
hopper
I−element
Idefix
Ivk
jockey
Juan
mdg
opus
pogo
Quasimodo
roo
rover
Rt1
S−element
springer
Stalker
Tabor
Tirant
Transpac
TE family

Table S1. Characteristics and frequency estimates for the 755 TEs analyzed in this work.

Flybase identifier (Release 5)	Order	Family	TE length (bp)	Recombination rate (cM/Mb)	MW frequency	NA frequency
FBti0019528	FB	FB	271	0	fixed	common
FBti0019903	FB	FB	799	0	fixed	fixed
FBti0020433	FB	FB	461	0	fixed	fixed
FBti0019722	FB	FB	491	3.05	fixed	fixed
FBti0019976	FB	FB	1960	0	absent	rare
FBti0020064	FB	FB	2265	3.2	absent	rare
FBti0019629	FB	FB	3107	3.31	absent	rare
FBti0020392	FB	FB	1309	1.87	absent	very rare
FBti0020385	FB	FB	2577	1.4	absent	very rare
FBti0018862	LTR	17.6	7493	0.66	absent	rare
FBti0019299	LTR	17.6	6751	0	absent	rare
FBti0019354	LTR	17.6	7474	0	absent	rare
FBti0018861	LTR	17.6	7493	0.37	absent	very rare
FBti0064268	LTR	17.6	7501	0	absent	very rare
FBti0020090	LTR	17.6	6894	3.19	absent	very rare
FBti0020019	LTR	17.6	7539	2.81	absent	very rare
FBti0019053	LTR	17.6	6153	3.44	absent	very rare
FBti0059648	LTR	297	3755	0	poly/fixed[a]	common
FBti0018868	LTR	297	413	2.44	polymorphic	common
FBti0019744	LTR	297	449	3.02	fixed	fixed
FBti0019734	LTR	297	305	3.04	fixed	fixed
FBti0020218	LTR	297	6916	0	absent	rare
FBti0018866	LTR	297	6991	1.5	absent	rare
FBti0019745	LTR	297	3233	3.02	absent/poly[b]	rare
FBti0019341	LTR	297	3786	0	polymorphic	rare
FBti0019349	LTR	297	5929	0	absent	rare
FBti0019353	LTR	297	6916	0	absent	rare
FBti0019648	LTR	297	3562	3.26	absent	rare
FBti0019567	LTR	297	6977	2.19	absent	rare
FBti0019591	LTR	297	5700	2.65	absent	rare
FBti0019749	LTR	297	6010	2.44	absent	very rare
FBti0019756	LTR	297	6998	3.6	absent	very rare
FBti0019750	LTR	297	6522	2.5	absent	very rare
FBti0018865	LTR	297	412	0.67	absent	very rare
FBti0020048	LTR	297	413	3.15	absent	very rare
FBti0019201	LTR	297	6977	0	absent	very rare
FBti0019184	LTR	297	6996	3.33	absent	very rare
FBti0019135	LTR	297	6916	3.41	absent	very rare
FBti0019762	LTR	297	6994	3.39	absent	very rare

FBti0020061	LTR	297	6994	3.2	absent	very rare
FBti0020059	LTR	297	3047	3.19	absent	very rare
FBti0019754	LTR	297	6996	3.47	absent	very rare
FBti0019333	LTR	297	3419	0	absent/poly	very rare
FBti0019525	LTR	297	5573	0	absent	very rare
FBti0019623	LTR	297	413	3.28	absent	very rare
FBti0019611	LTR	297	6994	3.14	absent	very rare
FBti0019356	LTR	297	5600	0	absent	very rare
FBti0019445	LTR	297	6997	1.81	absent	very rare
FBti0019434	LTR	297	5880	1.71	absent	very rare
FBti0019052	LTR	297	5599	3.44	absent	very rare
FBti0019735	LTR	297	6210	3.04	absent	very rare
FBti0019580	LTR	297	3046	2.45	absent	very rare
FBti0019612	LTR	297	5874	3.17	absent	very rare
FBti0019614	LTR	412	7440	3.17	absent	rare
FBti0020082	LTR	412	7502	3.21	absent	very rare
FBti0020179	LTR	412	481	0	absent	very rare
FBti0020073	LTR	412	3708	3.21	absent	very rare
FBti0019380	LTR	412	7197	0.46	absent	very rare
FBti0019383	LTR	412	7464	0.54	absent	very rare
FBti0019390	LTR	412	7490	0.82	absent	very rare
FBti0018874	LTR	412	7499	2.47	absent	very rare
FBti0018873	LTR	412	7427	2.45	absent	very rare
FBti0018872	LTR	412	7520	2.45	absent	very rare
FBti0018871	LTR	412	7566	2.44	absent	very rare
FBti0020132	LTR	412	7500	2.78	absent	very rare
FBti0020094	LTR	412	7567	3.18	absent	very rare
FBti0020013	LTR	412	7665	2.76	absent	very rare
FBti0020015	LTR	412	7590	2.78	absent	very rare
FBti0020072	LTR	412	7502	3.21	absent	very rare
FBti0020033	LTR	412	7440	3.05	absent	very rare
FBti0019521	LTR	412	7571	0	absent	very rare
FBti0019524	LTR	412	7504	0	absent	very rare
FBti0019086	LTR	412	6861	3.33	absent	very rare
FBti0019462	LTR	412	7567	0	absent	very rare
FBti0019440	LTR	412	7552	1.77	absent	very rare
FBti0019566	LTR	412	7575	2.16	absent	very rare
FBti0019582	LTR	412	3805	2.48	absent	very rare
FBti0019679	LTR	1731	310	3.12	absent	common
FBti0020201	LTR	3S18	6127	0	absent	very rare
FBti0018869	LTR	3S18	6129	2.01	absent	very rare
FBti0019523	LTR	3S18	6126	0	absent	very rare
FBti0019554	LTR	3S18	6126	2.02	absent	very rare
FBti0018951	LTR	accord	5224	1.08	absent	rare
FBti0019106	LTR	blood	7407	2.21	absent	very rare
FBti0019391	LTR	blood	7408	0.83	absent	very rare

FBti0018966	LTR	blood	7411	2.14	absent	very rare
FBti0018965	LTR	blood	7412	2	absent	very rare
FBti0019224	LTR	blood	7414	0	absent	very rare
FBti0019210	LTR	blood	7410	0	absent	very rare
FBti0019214	LTR	blood	7410	0	absent	very rare
FBti0019179	LTR	blood	7411	3.41	absent	very rare
FBti0019384	LTR	blood	7416	0.54	absent	very rare
FBti0019096	LTR	blood	7442	1.81	absent	very rare
FBti0019163	LTR	blood	7409	3.58	absent	very rare
FBti0019102	LTR	blood	7408	2.08	absent	very rare
FBti0019152	LTR	blood	7410	3.61	absent	very rare
FBti0019145	LTR	blood	7412	3.57	absent	very rare
FBti0020205	LTR	blood	7394	0	absent	very rare
FBti0020203	LTR	blood	7412	0	absent	very rare
FBti0019403	LTR	blood	7410	1.11	absent	very rare
FBti0020070	LTR	blood	7409	3.21	absent	very rare
FBti0019471	LTR	blood	7412	0	absent	very rare
FBti0019465	LTR	blood	7411	0	absent	very rare
FBti0018883	LTR	Burdock	6412	0.22	absent	rare
FBti0018884	LTR	Burdock	2575	1.66	absent	rare
FBti0019236	LTR	Burdock	6412	0	absent	rare
FBti0019305	LTR	Burdock	6402	0	absent	very rare
FBti0019128	LTR	Burdock	2864	3.21	absent	very rare
FBti0019132	LTR	Burdock	2378	3.37	absent	very rare
FBti0019408	LTR	Burdock	6413	1.17	absent	very rare
FBti0018881	LTR	Burdock	2574	0	absent	very rare
FBti0018882	LTR	Burdock	6411	0	absent	very rare
FBti0019283	LTR	Burdock	6412	0	absent	very rare
FBti0019626	LTR	Burdock	6412	3.3	absent	very rare
FBti0019176	LTR	copia	5144	3.47	absent	rare
FBti0018967	LTR	copia	5144	0	absent	rare
FBti0020108	LTR	copia	5147	3.04	polymorphic	rare
FBti0020099	LTR	copia	4423	3.13	absent	rare
FBti0018968	LTR	copia	5150	1.74	absent	rare
FBti0019110	LTR	copia	5146	2.37	absent	very rare
FBti0019183	LTR	copia	5148	3.33	absent	very rare
FBti0019151	LTR	copia	5145	3.61	absent	very rare
FBti0019113	LTR	copia	5144	2.57	absent	very rare
FBti0019117	LTR	copia	5144	2.7	absent	very rare
FBti0019405	LTR	copia	5147	1.15	absent	very rare
FBti0020021	LTR	copia	5145	2.87	absent	very rare
FBti0020031	LTR	copia	5252	2.99	absent	very rare
FBti0018969	LTR	copia	5145	1.84	absent	very rare
FBti0018970	LTR	copia	5143	2.16	absent	very rare
FBti0019059	LTR	copia	5145	3.45	absent	very rare
FBti0019364	LTR	copia	5144	0.09	absent	very rare

FBti0019469	LTR	copia	5141	0	absent	very rare
FBti0019468	LTR	copia	5143	0	absent	very rare
FBti0019586	LTR	copia	5146	2.56	absent	very rare
FBti0019050	LTR	copia	4528	3.44	absent	very rare
FBti0019307	LTR	diver	6132	0	absent	very rare
FBti0019387	LTR	diver	6132	0.71	absent	very rare
FBti0019129	LTR	diver	6132	3.28	absent	very rare
FBti0018971	LTR	diver	6132	0.12	absent	very rare
FBti0020037	LTR	diver	6131	3.08	absent	very rare
FBti0018973	LTR	diver	6111	2.38	absent	very rare
FBti0018972	LTR	diver	6131	1.83	absent	very rare
FBti0019467	LTR	diver	6132	0	absent	very rare
FBti0019212	LTR	flea	5028	0	absent	rare
FBti0018958	LTR	flea	5018	0	absent	rare
FBti0019207	LTR	flea	5018	0	absent	very rare
FBti0018959	LTR	flea	5028	0	absent	very rare
FBti0018960	LTR	flea	5028	0	absent	very rare
FBti0018964	LTR	flea	5018	2.42	absent	very rare
FBti0018963	LTR	flea	5028	2.4	absent	very rare
FBti0018962	LTR	flea	1904	2.39	absent	very rare
FBti0018961	LTR	flea	4263	0.74	absent	very rare
FBti0020185	LTR	flea	5026	0	absent	very rare
FBti0019522	LTR	flea	5028	0	absent	very rare
FBti0019077	LTR	flea	3240	3.41	absent	very rare
FBti0019073	LTR	flea	5028	3.43	absent	very rare
FBti0019633	LTR	flea	3844	3.36	absent	very rare
FBti0019621	LTR	flea	5018	3.27	absent	very rare
FBti0019425	LTR	flea	5018	1.56	absent	very rare
FBti0019258	LTR	frogger	2482	0	poly/fixed	common
FBti0019259	LTR	gypsy	214	0	fixed	fixed
FBti0019270	LTR	gypsy	1009	0	fixed	fixed
FBti0019284	LTR	gypsy	295	0	fixed	fixed
FBti0020147	LTR	gypsy	1466	2.68	polymorphic	rare
FBti0020117	LTR	gypsy	2785	2.99	absent	rare
FBti0019103	LTR	gypsy	481	2.1	absent	very rare
FBti0019622	LTR	gypsy	7363	3.27	absent	very rare
FBti0019154	LTR	HMS-Beagle	7071	3.6	absent	very rare
FBti0019143	LTR	HMS-Beagle	7061	3.57	absent	very rare
FBti0019130	LTR	HMS-Beagle	7061	3.3	absent	very rare
FBti0019185	LTR	HMS-Beagle	7056	3.28	absent	very rare
FBti0019545	LTR	HMS-Beagle	7059	1.83	absent	very rare
FBti0019635	LTR	HMS-Beagle	7056	3.39	absent	very rare
FBti0019300	LTR	HMS-Beagle	7044	0	absent	very rare
FBti0019249	LTR	Idefix	491	0	fixed	common
FBti0020200	LTR	Idefix	246	0	fixed	fixed
FBti0019088	LTR	Idefix	7460	3.31	absent	rare

FBti0019375	LTR	Idefix	7440	0.32	absent	very rare
FBti0018980	LTR	invader	415	0	polymorphic	common
FBti0020138	LTR	invader	345	2.75	polymorphic	common
FBti0018978	LTR	invader	4026	0	absent	common
FBti0020280	LTR	invader	5055	0	polymorphic	common
FBti0019739	LTR	invader	3692	3.03	poly/fixed	common
FBti0020169	LTR	invader	336	0	fixed	fixed
FBti0020183	LTR	invader	285	0	fixed	fixed
FBti0020198	LTR	invader	270	0	fixed	fixed
FBti0019329	LTR	invader	301	0	fixed	fixed
FBti0020190	LTR	McClintock	6449	0	polymorphic	common
FBti0020171	LTR	mdg	5519	0	absent	rare
FBti0020158	LTR	mdg	7389	2.6	absent/poly	rare
FBti0019350	LTR	mdg	5519	0	absent	rare
FBti0020011	LTR	mdg	7368	2.75	absent/poly	very rare
FBti0020025	LTR	mdg	7366	2.94	absent/poly	very rare
FBti0019107	LTR	mdg	267	2.21	absent	very rare
FBti0019108	LTR	mdg	5519	2.24	absent	very rare
FBti0019000	LTR	mdg	7366	1.49	absent/poly	very rare
FBti0019114	LTR	mdg	7371	2.6	absent/poly	very rare
FBti0019001	LTR	mdg	7354	2.16	absent/poly	very rare
FBti0019120	LTR	mdg	7383	2.91	absent/poly	very rare
FBti0019002	LTR	mdg	7450	2.47	absent	very rare
FBti0019414	LTR	mdg	7334	1.34	absent	very rare
FBti0019047	LTR	mdg	5519	3.42	absent	very rare
FBti0019610	LTR	mdg	266	3.11	absent	very rare
FBti0019447	LTR	mdg	7372	1.83	absent/poly	very rare
FBti0019301	LTR	mdg	5459	0	absent	very rare
FBti0019281	LTR	mdg	5517	0	absent	very rare
FBti0019366	LTR	mdg	5519	0.13	absent	very rare
FBti0019076	LTR	mdg	444	3.42	absent	very rare
FBti0019069	LTR	mdg	5519	3.45	absent	very rare
FBti0019548	LTR	mdg	7352	1.89	absent	very rare
FBti0019698	LTR	micropia	3008	3.11	polymorphic	common
FBti0020144	LTR	opus	2747	2.74	absent	rare
FBti0019396	LTR	opus	7616	0.89	absent	very rare
FBti0019109	LTR	opus	7606	2.33	absent	very rare
FBti0020118	LTR	opus	2804	2.98	absent	very rare
FBti0019040	LTR	opus	7524	0	absent	very rare
FBti0019187	LTR	opus	7614	3.19	absent	very rare
FBti0019178	LTR	opus	7524	3.45	absent	very rare
FBti0019042	LTR	opus	7601	1.26	absent	very rare
FBti0019146	LTR	opus	7604	3.59	absent	very rare
FBti0019043	LTR	opus	2572	2.18	absent	very rare
FBti0019121	LTR	opus	7526	2.92	absent	very rare
FBti0019044	LTR	opus	2579	2.27	absent	very rare

FBti0019540	LTR	opus	7514	1.65	absent	very rare
FBti0019422	LTR	opus	7613	1.53	absent	very rare
FBti0019055	LTR	opus	7603	3.45	absent	very rare
FBti0019552	LTR	opus	7607	1.97	absent	very rare
FBti0019217	LTR	Quasimodo	659	0	polymorphic	rare
FBti0020041	LTR	Quasimodo	7378	3.1	absent	rare
FBti0019282	LTR	Quasimodo	7354	0	absent	rare
FBti0019159	LTR	Quasimodo	7386	3.59	absent	very rare
FBti0019587	LTR	Quasimodo	7375	2.6	absent	very rare
FBti0019985	LTR	roo	433	0.4	polymorphic	common
FBti0020410	LTR	roo	6751	0	poly/fixed	common
FBti0020296	LTR	roo	355	0	fixed	fixed
FBti0019572	LTR	roo	1193	2.33	fixed	fixed
FBti0019394	LTR	roo	427	0.85	absent	rare
FBti0019017	LTR	roo	427	0.24	absent	rare
FBti0020106	LTR	roo	427	3.06	absent	rare
FBti0019432	LTR	roo	9123	1.69	absent	rare
FBti0019420	LTR	roo	427	1.52	absent	rare
FBti0019615	LTR	roo	9091	3.19	absent	rare
FBti0019337	LTR	roo	9107	0	absent	rare
FBti0019539	LTR	roo	9106	1.6	absent	rare
FBti0019205	LTR	roo	9077	0	absent	very rare
FBti0019196	LTR	roo	9088	0	absent/poly	very rare
FBti0019101	LTR	roo	9036	2.01	absent	very rare
FBti0019374	LTR	roo	9091	0.31	absent	very rare
FBti0019393	LTR	roo	433	0.84	absent	very rare
FBti0019148	LTR	roo	9156	3.6	absent	very rare
FBti0019140	LTR	roo	7451	3.51	absent	very rare
FBti0019138	LTR	roo	9112	3.46	absent	very rare
FBti0019131	LTR	roo	7057	3.34	absent	very rare
FBti0019402	LTR	roo	9097	1.07	absent	very rare
FBti0019406	LTR	roo	9111	1.16	absent	very rare
FBti0019409	LTR	roo	427	1.18	absent	very rare
FBti0019416	LTR	roo	9001	1.38	absent	very rare
FBti0020170	LTR	roo	9198	0	absent	very rare
FBti0020154	LTR	roo	8622	2.64	absent	very rare
FBti0019016	LTR	roo	428	0	absent	very rare
FBti0019278	LTR	roo	9090	0.27	absent	very rare
FBti0019021	LTR	roo	8307	1.05	absent	very rare
FBti0020085	LTR	roo	8720	3.21	absent	very rare
FBti0020022	LTR	roo	9097	2.9	absent	very rare
FBti0020076	LTR	roo	7696	3.21	absent	very rare
FBti0020069	LTR	roo	9100	3.21	absent	very rare
FBti0019025	LTR	roo	9093	1.39	absent	very rare
FBti0020063	LTR	roo	9113	3.2	absent	very rare
FBti0019030	LTR	roo	8181	2.32	absent	very rare

FBti0019029	LTR	roo	427	2.32	absent	very rare
FBti0019027	LTR	roo	9104	2.2	absent	very rare
FBti0019026	LTR	roo	9093	2.01	absent	very rare
FBti0019238	LTR	roo	9105	0	absent	very rare
FBti0019015	LTR	roo	7689	0	absent	very rare
FBti0019018	LTR	roo	9108	0.48	absent	very rare
FBti0019019	LTR	roo	9115	0.68	absent	very rare
FBti0019175	LTR	roo	9104	3.48	absent	very rare
FBti0019173	LTR	roo	9091	3.54	absent	very rare
FBti0019020	LTR	roo	1745	1	absent	very rare
FBti0019022	LTR	roo	8304	1.07	absent	very rare
FBti0019098	LTR	roo	8981	1.92	absent	very rare
FBti0019100	LTR	roo	7577	2	absent	very rare
FBti0019031	LTR	roo	8303	2.46	absent	very rare
FBti0019126	LTR	roo	8949	3.13	absent	very rare
FBti0020131	LTR	roo	9090	2.83	absent	very rare
FBti0020129	LTR	roo	9094	2.84	absent	very rare
FBti0020121	LTR	roo	9088	2.93	absent	very rare
FBti0020100	LTR	roo	7737	3.1	absent	very rare
FBti0020007	LTR	roo	9108	0	absent	very rare
FBti0020014	LTR	roo	9092	2.77	absent	very rare
FBti0020038	LTR	roo	9093	3.09	absent	very rare
FBti0020055	LTR	roo	7433	3.17	absent	very rare
FBti0019028	LTR	roo	9101	2.32	absent	very rare
FBti0019461	LTR	roo	7533	0	absent/poly	very rare
FBti0019438	LTR	roo	427	1.75	absent/poly	very rare
FBti0019658	LTR	roo	7544	3.19	absent	very rare
FBti0019608	LTR	roo	7451	3.03	polymorphic	very rare
FBti0019458	LTR	roo	9098	1.9	absent	very rare
FBti0019285	LTR	roo	8324	0	absent	very rare
FBti0019363	LTR	roo	427	0.08	absent	very rare
FBti0019553	LTR	roo	9090	1.98	absent	very rare
FBti0019436	LTR	roo	9002	1.73	absent	very rare
FBti0019435	LTR	roo	9101	1.72	absent	very rare
FBti0019431	LTR	roo	9101	1.68	absent	very rare
FBti0019421	LTR	roo	9092	1.53	absent	very rare
FBti0019068	LTR	roo	9098	3.45	absent	very rare
FBti0019067	LTR	roo	8291	3.46	absent	very rare
FBti0019060	LTR	roo	9198	3.46	absent	very rare
FBti0019597	LTR	roo	9100	2.77	absent	very rare
FBti0019339	LTR	roo	9094	0	absent	very rare
FBti0019357	LTR	roo	9096	0	absent	very rare
FBti0019526	LTR	roo	7733	0	absent	very rare
FBti0019532	LTR	roo	8735	0	absent	very rare
FBti0019083	LTR	roo	8604	3.35	absent	very rare
FBti0019544	LTR	roo	8294	1.77	absent	very rare

FBti0019547	LTR	roo	8489	1.88	absent	very rare
FBti0019463	LTR	roo	8207	0	absent	very rare
FBti0019439	LTR	roo	9076	1.76	absent	very rare
FBti0019051	LTR	roo	9092	3.44	absent	very rare
FBti0019556	LTR	roo	9100	2.04	absent	very rare
FBti0019630	LTR	roo	7088	3.32	absent	very rare
FBti0019619	LTR	roo	5078	3.23	absent	very rare
FBti0019066	LTR	rover	375	3.46	absent	rare
FBti0019298	LTR	rover	7319	0	absent	very rare
FBti0019061	LTR	rover	7469	3.46	absent	very rare
FBti0020178	LTR	springer	7542	0	absent	rare
FBti0019115	LTR	springer	7509	2.61	absent	very rare
FBti0019466	LTR	springer	7542	0	absent	very rare
FBti0019578	LTR	springer	7509	2.39	absent	very rare
FBti0019616	LTR	springer	7509	3.2	absent	very rare
FBti0020309	LTR	Stalker	377	0	fixed	fixed
FBti0020162	LTR	Stalker	431	0	absent	rare
FBti0020153	LTR	Stalker	7894	2.65	absent	very rare
FBti0020112	LTR	Stalker	7669	3.02	absent	very rare
FBti0020062	LTR	Stalker	2460	3.2	absent	very rare
FBti0020416	LTR	Stalker	8118	0	absent	very rare
FBti0019571	LTR	Stalker	430	2.32	absent	very rare
FBti0019541	LTR	Stalker	7882	1.66	absent	very rare
FBti0019646	LTR	Stalker	7255	3.28	absent	very rare
FBti0020386	LTR	Stalker	7254	1.74	absent	very rare
FBti0019574	LTR	Stalker	7313	2.34	absent	very rare
FBti0019625	LTR	Stalker	7288	3.28	absent	very rare
FBti0019180	LTR	Tabor	2372	3.37	absent	very rare
FBti0019150	LTR	Tabor	7344	3.61	absent	very rare
FBti0019596	LTR	Tabor	7332	2.75	absent	very rare
FBti0019543	LTR	Tirant	8526	1.75	absent	rare
FBti0019220	LTR	Tirant	8204	0	absent	very rare
FBti0019139	LTR	Tirant	8320	3.48	absent	very rare
FBti0018946	LTR	Tirant	8526	0.58	absent	very rare
FBti0020024	LTR	Tirant	8220	2.94	absent	very rare
FBti0018947	LTR	Tirant	8424	1.51	absent	very rare
FBti0018948	LTR	Tirant	8526	1.55	absent	very rare
FBti0020184	LTR	Tirant	8424	0	absent	very rare
FBti0020010	LTR	Tirant	8424	2.74	absent	very rare
FBti0019413	LTR	Tirant	8425	1.27	absent	very rare
FBti0020028	LTR	Tirant	8526	2.95	absent	very rare
FBti0019311	LTR	Tirant	8424	0	absent	very rare
FBti0019495	LTR	Tirant	8525	0	absent	very rare
FBti0019072	LTR	Tirant	5570	3.44	absent	very rare
FBti0019441	LTR	Tirant	8525	1.78	absent	very rare
FBti0019433	LTR	Tirant	8526	1.71	absent	very rare

FBti0019592	LTR	Tirant	8425	2.67	absent	very rare
FBti0019313	LTR	Tirant	8526	0	absent	very rare
FBti0019588	LTR	Tirant	2453	2.63	absent	very rare
FBti0019169	LTR	Transpac	5248	3.56	absent	very rare
FBti0019080	LTR	Transpac	5253	3.38	absent	very rare
FBti0019551	LTR	Transpac	5248	1.94	absent	very rare
FBti0019334	LTR	Transpac	5247	0	absent	very rare
FBti0019444	LTR	Transpac	5247	1.81	absent	very rare
FBti0018955	non-LTR	baggins	1618	0	poly/fixed	common
FBti0018957	non-LTR	baggins	850	0	fixed	common
FBti0019223	non-LTR	BS	406	0	polymorphic	common
FBti0019165	non-LTR	BS	2326	3.57	absent	common
FBti0019133	non-LTR	BS	125	3.37	absent	common
FBti0019378	non-LTR	BS	128	0.45	polymorphic	common
FBti0019410	non-LTR	BS	745	1.2	absent	common
FBti0020149	non-LTR	BS	5117	2.67	absent	common
FBti0020125	non-LTR	BS	5123	2.88	absent	common
FBti0020056	non-LTR	BS	541	3.18	absent/poly	common
FBti0020057	non-LTR	BS	125	3.18	absent	common
FBti0018879	non-LTR	BS	136	2.37	absent	common
FBti0019312	non-LTR	BS	153	0	poly/fixed	common
FBti0019315	non-LTR	BS	151	0	absent	common
FBti0019079	non-LTR	BS	473	3.39	polymorphic	common
FBti0019604	non-LTR	BS	330	2.96	absent	common
FBti0018876	non-LTR	BS	126	0	fixed	fixed
FBti0020128	non-LTR	BS	125	2.86	fixed	fixed
FBti0019158	non-LTR	BS	144	3.59	polymorphic	rare
FBti0019388	non-LTR	BS	362	0.79	absent	rare
FBti0018877	non-LTR	BS	130	0.42	absent	rare
FBti0018878	non-LTR	BS	128	0.72	polymorphic	rare
FBti0019426	non-LTR	BS	150	1.59	absent	rare
FBti0018875	non-LTR	BS	5127	0	absent	very rare
FBti0019358	non-LTR	BS	5121	0	absent	very rare
FBti0018892	non-LTR	Cr1a	459	0	polymorphic	common
FBti0020161	non-LTR	Cr1a	2073	0	polymorphic	common
FBti0020192	non-LTR	Cr1a	3603	0	poly/fixed	common
FBti0019203	non-LTR	Cr1a	605	0	fixed	fixed
FBti0018889	non-LTR	Cr1a	1869	0	fixed	fixed
FBti0018891	non-LTR	Cr1a	1729	0	fixed	fixed
FBti0018887	non-LTR	Cr1a	277	0	fixed	fixed
FBti0020168	non-LTR	Cr1a	2840	0	fixed	fixed
FBti0020151	non-LTR	Cr1a	674	2.66	fixed	fixed
FBti0020213	non-LTR	Cr1a	913	0	fixed	fixed
FBti0020202	non-LTR	Cr1a	1542	0	fixed	fixed
FBti0019293	non-LTR	Cr1a	1240	0	fixed	fixed
FBti0019517	non-LTR	Cr1a	739	0	fixed	fixed

FBti0019514	non-LTR	Cr1a	465	0	fixed	fixed
FBti0019483	non-LTR	Cr1a	660	0	fixed	fixed
FBti0019515	non-LTR	Doc	2591	0	poly/fixed	common
FBti0019199	non-LTR	Doc	2795	0	fixed	fixed
FBti0020259	non-LTR	Doc	1338	0	fixed	fixed
FBti0019377	non-LTR	Doc	3700	0.45	absent	rare
FBti0018902	non-LTR	Doc	4718	0	absent	rare
FBti0020152	non-LTR	Doc	1919	2.66	absent	rare
FBti0020123	non-LTR	Doc	2284	2.89	absent	rare
FBti0020111	non-LTR	Doc	2928	3.03	absent	rare
FBti0020053	non-LTR	Doc	1948	3.17	absent	rare
FBti0019589	non-LTR	Doc	4696	2.64	absent	rare
FBti0020039	non-LTR	Doc	4721	3.09	absent	very rare
FBti0020054	non-LTR	Doc	4724	3.17	absent	very rare
FBti0019200	non-LTR	Doc	4722	0	absent	very rare
FBti0019198	non-LTR	Doc	4718	0	absent	very rare
FBti0019186	non-LTR	Doc	4722	3.22	absent	very rare
FBti0019172	non-LTR	Doc	1046	3.55	absent	very rare
FBti0019166	non-LTR	Doc	4723	3.56	absent	very rare
FBti0019157	non-LTR	Doc	4718	3.59	absent	very rare
FBti0019141	non-LTR	Doc	4719	3.52	absent	very rare
FBti0019125	non-LTR	Doc	2307	3.04	absent	very rare
FBti0019412	non-LTR	Doc	4719	1.24	absent	very rare
FBti0020163	non-LTR	Doc	4720	0	absent	very rare
FBti0020159	non-LTR	Doc	1315	2.58	absent	very rare
FBti0018903	non-LTR	Doc	4717	0.02	absent	very rare
FBti0020095	non-LTR	Doc	4709	3.18	absent	very rare
FBti0018904	non-LTR	Doc	4725	1.14	absent	very rare
FBti0020087	non-LTR	Doc	2304	3.21	absent	very rare
FBti0020081	non-LTR	Doc	1621	3.21	absent	very rare
FBti0020077	non-LTR	Doc	2759	3.21	absent	very rare
FBti0020029	non-LTR	Doc	427	2.97	absent	very rare
FBti0018905	non-LTR	Doc	4720	1.38	absent	very rare
FBti0020212	non-LTR	Doc	1073	0	absent	very rare
FBti0020204	non-LTR	Doc	4718	0	absent	very rare
FBti0019321	non-LTR	Doc	1729	0	absent	very rare
FBti0019367	non-LTR	Doc	4720	0.16	absent	very rare
FBti0019084	non-LTR	Doc	4717	3.34	absent	very rare
FBti0019470	non-LTR	Doc	4707	0	absent	very rare
FBti0019417	non-LTR	Doc	3639	1.45	absent	very rare
FBti0019429	non-LTR	Doc	4724	1.62	absent	very rare
FBti0019428	non-LTR	Doc	2310	1.61	absent	very rare
FBti0019583	non-LTR	Doc	4720	2.52	absent	very rare
FBti0019058	non-LTR	Doc	4720	3.45	absent	very rare
FBti0019326	non-LTR	Doc	4698	0	absent	very rare
FBti0019296	non-LTR	F-element	4236	0	absent	common

FBti0019747	non-LTR	F-element	4693	3.01	absent	common
FBti0019389	non-LTR	F-element	1491	0.8	absent	rare
FBti0019407	non-LTR	F-element	3546	1.17	absent	rare
FBti0018913	non-LTR	F-element	4706	0	absent	rare
FBti0020115	non-LTR	F-element	244	3.01	absent	rare
FBti0020105	non-LTR	F-element	4367	3.06	absent	rare
FBti0020023	non-LTR	F-element	4203	2.93	absent	rare
FBti0018916	non-LTR	F-element	3804	1.95	absent	rare
FBti0020195	non-LTR	F-element	268	0	absent	rare
FBti0019054	non-LTR	F-element	4697	3.45	absent	rare
FBti0019382	non-LTR	F-element	4694	0.47	absent	very rare
FBti0018915	non-LTR	F-element	4693	1.87	absent	very rare
FBti0019104	non-LTR	F-element	2809	2.18	absent	very rare
FBti0019191	non-LTR	F-element	4707	3.1	absent	very rare
FBti0019373	non-LTR	F-element	4689	0.31	absent	very rare
FBti0019385	non-LTR	F-element	4695	0.56	absent	very rare
FBti0019392	non-LTR	F-element	362	0.83	absent	very rare
FBti0019397	non-LTR	F-element	1498	0.9	absent	very rare
FBti0019160	non-LTR	F-element	3612	3.59	absent	very rare
FBti0019156	non-LTR	F-element	4693	3.59	absent	very rare
FBti0019401	non-LTR	F-element	4239	1.04	absent	very rare
FBti0018914	non-LTR	F-element	4709	0	absent	very rare
FBti0020109	non-LTR	F-element	4696	3.04	absent	very rare
FBti0020060	non-LTR	F-element	4704	3.19	absent	very rare
FBti0019336	non-LTR	F-element	785	0	absent	very rare
FBti0020188	non-LTR	G	903	0	polymorphic	common
FBti0019520	non-LTR	G	368	0	fixed	common
FBti0020310	non-LTR	G	3150	0	fixed	fixed
FBti0020308	non-LTR	G	540	0	fixed	fixed
FBti0019781	non-LTR	G	711	0	fixed	fixed
FBti0019830	non-LTR	G	2702	0	fixed	fixed
FBti0019849	non-LTR	G	1084	0	fixed	fixed
FBti0019755	non-LTR	G	192	3.49	fixed	fixed
FBti0018920	non-LTR	G	1274	0	fixed	fixed
FBti0020311	non-LTR	G	605	0	fixed	fixed
FBti0020312	non-LTR	G	713	0	fixed	fixed
FBti0020406	non-LTR	G	811	0	fixed	fixed
FBti0020329	non-LTR	G	273	0	fixed	fixed
FBti0019782	non-LTR	G	486	0	fixed	fixed
FBti0020130	non-LTR	G	123	2.83	polymorphic	rare
FBti0019335	non-LTR	G	3030	0	absent	rare
FBti0019149	non-LTR	G	2365	3.6	absent	very rare
FBti0018918	non-LTR	G	1917	2.47	absent	very rare
FBti0020314	non-LTR	Helena	278	0	fixed	fixed
FBti0018926	non-LTR	I-element	549	0.02	fixed	fixed
FBti0019368	non-LTR	I-element	323	0.17	fixed	fixed

FBti0019111	non-LTR	I-element	1767	2.47	absent	very rare
FBti0020189	non-LTR	I-element	5371	0	absent	very rare
FBti0020071	non-LTR	I-element	5351	3.21	absent	very rare
FBti0019660	non-LTR	I-element	5370	3.18	absent	very rare
FBti0019537	non-LTR	I-element	1726	0	absent	very rare
FBti0019446	non-LTR	I-element	5370	1.82	absent	very rare
FBti0019442	non-LTR	I-element	5370	1.8	absent	very rare
FBti0019581	non-LTR	I-element	3886	2.47	absent	very rare
FBti0019063	non-LTR	I-element	187	3.46	absent	very rare
FBti0019057	non-LTR	I-element	5370	3.45	absent	very rare
FBti0019232	non-LTR	Ivk	2961	0	fixed	fixed
FBti0020209	non-LTR	Ivk	5368	0	absent	rare
FBti0019678	non-LTR	Ivk	5369	3.12	absent	very rare
FBti0020042	non-LTR	jockey	275	3.12	polymorphic	common
FBti0019177	non-LTR	jockey	352	3.46	absent	rare
FBti0019168	non-LTR	jockey	541	3.56	absent	rare
FBti0019376	non-LTR	jockey	1435	0.32	absent/poly	rare
FBti0020156	non-LTR	jockey	268	2.61	absent	rare
FBti0020097	non-LTR	jockey	2208	3.13	absent	rare
FBti0018987	non-LTR	jockey	5009	1.07	absent	rare
FBti0020092	non-LTR	jockey	3129	3.19	absent	rare
FBti0020083	non-LTR	jockey	263	3.21	polymorphic	rare
FBti0020030	non-LTR	jockey	380	2.98	absent	rare
FBti0018997	non-LTR	jockey	348	2.39	polymorphic	rare
FBti0018996	non-LTR	jockey	3482	2.37	absent	rare
FBti0018990	non-LTR	jockey	4958	1.83	absent	rare
FBti0018992	non-LTR	jockey	271	1.95	absent	rare
FBti0018993	non-LTR	jockey	3243	2.15	absent	rare
FBti0020084	non-LTR	jockey	5010	3.21	absent	rare
FBti0019320	non-LTR	jockey	5016	0	absent	rare
FBti0019340	non-LTR	jockey	2325	0	absent	rare
FBti0019345	non-LTR	jockey	362	0	absent	rare
FBti0019369	non-LTR	jockey	2731	0.2	absent	rare
FBti0019464	non-LTR	jockey	2396	0	absent	rare
FBti0019454	non-LTR	jockey	1197	1.88	absent	rare
FBti0019453	non-LTR	jockey	247	1.88	polymorphic	rare
FBti0019448	non-LTR	jockey	2433	1.83	absent	rare
FBti0019570	non-LTR	jockey	5017	2.32	absent	rare
FBti0019579	non-LTR	jockey	1172	2.44	absent	rare
FBti0019666	non-LTR	jockey	954	3.16	absent	rare
FBti0019075	non-LTR	jockey	267	3.43	absent	rare
FBti0019599	non-LTR	jockey	378	2.86	absent	rare
FBti0019606	non-LTR	jockey	359	3.03	absent	rare
FBti0019609	non-LTR	jockey	1438	3.1	absent	rare
FBti0019451	non-LTR	jockey	5014	1.86	absent	rare
FBti0019105	non-LTR	jockey	248	2.19	polymorphic	very rare

FBti0020012	non-LTR	jockey	1048	2.75	absent	very rare
FBti0019092	non-LTR	jockey	5005	0	absent	very rare
FBti0019218	non-LTR	jockey	5016	0	absent	very rare
FBti0019204	non-LTR	jockey	915	0	absent	very rare
FBti0019142	non-LTR	jockey	2908	3.53	absent	very rare
FBti0019122	non-LTR	jockey	5001	2.97	absent	very rare
FBti0018985	non-LTR	jockey	5013	0	absent	very rare
FBti0020124	non-LTR	jockey	440	2.88	absent	very rare
FBti0020120	non-LTR	jockey	499	2.94	absent	very rare
FBti0018986	non-LTR	jockey	4984	0.68	absent	very rare
FBti0020075	non-LTR	jockey	603	3.21	absent	very rare
FBti0018994	non-LTR	jockey	1714	2.36	absent	very rare
FBti0018995	non-LTR	jockey	360	2.36	absent	very rare
FBti0018991	non-LTR	jockey	343	1.84	absent	very rare
FBti0019070	non-LTR	jockey	339	3.44	polymorphic	very rare
FBti0019045	non-LTR	jockey	291	3.41	absent	very rare
FBti0019089	non-LTR	jockey	501	3.31	absent	very rare
FBti0019449	non-LTR	jockey	354	1.83	absent	very rare
FBti0019423	non-LTR	jockey	362	1.55	absent	very rare
FBti0019573	non-LTR	jockey	349	2.33	absent	very rare
FBti0019046	non-LTR	jockey	1087	3.42	absent	very rare
FBti0019598	non-LTR	jockey	1432	2.82	absent	very rare
FBti0019118	non-LTR	Juan	2749	2.79	absent	rare
FBti0019381	non-LTR	Juan	2994	0.47	absent	rare
FBti0018927	non-LTR	Juan	4235	0	absent	rare
FBti0020133	non-LTR	Juan	511	2.76	absent	rare
FBti0019064	non-LTR	Juan	4225	3.46	absent	rare
FBti0019602	non-LTR	Juan	4234	2.91	absent	rare
FBti0019286	non-LTR	Juan	4231	0	absent	very rare
FBti0019248	non-LTR	R1-element	369	0	fixed	common
FBti0020235	non-LTR	R1-element	5297	0	absent	common
FBti0019144	non-LTR	Rt1	5170	3.57	absent	common
FBti0019318	non-LTR	Rt1	2250	0	absent	common
FBti0019344	non-LTR	Rt1	5176	0	polymorphic	common
FBti0019656	non-LTR	Rt1	1104	3.23	fixed	common
FBti0019653	non-LTR	Rt1	1725	3.25	fixed	fixed
FBti0020098	non-LTR	Rt1	5170	3.13	absent	rare
FBti0019008	non-LTR	Rt1	1911	1.29	absent	rare
FBti0020036	non-LTR	Rt1	650	3.07	absent	rare
FBti0019304	non-LTR	Rt1	5026	0	absent	rare
FBti0019404	non-LTR	Rt1	5174	1.11	absent	rare
FBti0018936	non-LTR	Rt1	1655	0.04	absent	rare
FBti0020110	non-LTR	Rt1	1789	3.03	absent	rare
FBti0018937	non-LTR	Rt1	2078	1.01	absent	rare
FBti0020068	non-LTR	Rt1	5177	3.2	absent	rare
FBti0020052	non-LTR	Rt1	364	3.16	absent	rare

FBti0019355	non-LTR	Rt1	5169	0	absent	rare
FBti0019590	non-LTR	Rt1	5169	2.65	absent	rare
FBti0019147	non-LTR	Rt1	1533	3.6	absent	very rare
FBti0020016	non-LTR	Rt1	5192	2.8	absent	very rare
FBti0020101	non-LTR	Rt1	5194	3.1	absent	very rare
FBti0019371	non-LTR	Rt1	2105	0.28	absent	very rare
FBti0019164	non-LTR	X-element	180	3.58	absent	common
FBti0020089	non-LTR	X-element	1647	3.19	absent	common
FBti0020278	non-LTR	X-element	4727	0	polymorphic	common
FBti0019632	non-LTR	X-element	1240	3.36	absent	common
FBti0019093	non-LTR	X-element	620	0	fixed	fixed
FBti0019316	non-LTR	X-element	578	0	fixed	fixed
FBti0019324	non-LTR	X-element	708	0	fixed	fixed
FBti0019074	non-LTR	X-element	215	3.43	fixed	fixed
FBti0019213	non-LTR	X-element	335	0	absent	rare
FBti0020107	non-LTR	X-element	4728	3.05	absent	rare
FBti0019842	TIR	1360	1143	0	absent	common
FBti0019771	TIR	1360	1105	3.16	absent	common
FBti0020155	TIR	1360	1103	2.63	absent	common
FBti0020207	TIR	1360	579	0	absent	common
FBti0020322	TIR	1360	1106	0	absent	common
FBti0020323	TIR	1360	1095	0	absent	common
FBti0019634	TIR	1360	646	3.38	polymorphic	common
FBti0019828	TIR	1360	462	0	fixed	fixed
FBti0019917	TIR	1360	1068	0	fixed	fixed
FBti0020018	TIR	1360	673	2.81	fixed	fixed
FBti0020282	TIR	1360	1122	0	fixed	fixed
FBti0020230	TIR	1360	1202	0	fixed	fixed
FBti0020415	TIR	1360	1151	0	fixed	fixed
FBti0019516	TIR	1360	1131	0	fixed	fixed
FBti0020419	TIR	1360	680	0	fixed	fixed
FBti0019472	TIR	1360	1043	0	fixed	fixed
FBti0019494	TIR	1360	1059	0	fixed	fixed
FBti0020438	TIR	1360	1132	0	fixed	fixed
FBti0019639	TIR	1360	684	3.39	fixed	fixed
FBti0019309	TIR	1360	1106	0	absent	rare
FBti0019780	TIR	1360	3408	0	absent	rare
FBti0019939	TIR	1360	1087	0	fixed	rare
FBti0019279	TIR	1360	1104	0.44	absent	rare
FBti0020116	TIR	1360	1105	3	absent/poly	rare
FBti0019992	TIR	1360	1105	1.4	absent	rare
FBti0019993	TIR	1360	695	1.55	absent	rare
FBti0020301	TIR	1360	1199	0	polymorphic	rare
FBti0019330	TIR	1360	1001	0	absent	rare
FBti0019546	TIR	1360	1085	1.84	absent	rare
FBti0019418	TIR	1360	1101	1.5	absent	rare

FBti0019637	TIR	1360	1106	3.46	absent	rare
FBti0019613	TIR	1360	1005	3.17	absent	rare
FBti0019770	TIR	1360	1104	3.31	absent	very rare
FBti0020017	TIR	1360	1106	2.81	absent	very rare
FBti0019400	TIR	Bari	1739	1.04	polymorphic	common
FBti0020436	TIR	Bari	1196	0	fixed	fixed
FBti0019099	TIR	Bari	1727	1.94	absent	very rare
FBti0019419	TIR	Bari	1727	1.51	absent	very rare
FBti0059666	TIR	HB	9405	0	poly/fixed	common
FBti0019748	TIR	HB	1572	3.01	poly/fixed	common
FBti0020003	TIR	HB	342	0	fixed	fixed
FBti0019998	TIR	HB	1024	0	fixed	fixed
FBti0020295	TIR	HB	1140	0	fixed	fixed
FBti0020313	TIR	HB	915	0	fixed	fixed
FBti0020298	TIR	HB	1491	0	fixed	fixed
FBti0019636	TIR	HB	609	3.46	fixed	fixed
FBti0019605	TIR	HB	603	2.97	fixed	fixed
FBti0019603	TIR	hobo	2980	2.95	fixed	fixed
FBti0019192	TIR	hobo	1405	3.1	absent	rare
FBti0019161	TIR	hobo	1405	3.59	absent	rare
FBti0019763	TIR	hobo	1405	3.39	fixed	very rare
FBti0019195	TIR	hobo	1405	0	absent	very rare
FBti0019189	TIR	hobo	1405	3.18	absent	very rare
FBti0019182	TIR	hobo	1405	3.35	absent	very rare
FBti0019395	TIR	hobo	1405	0.88	absent	very rare
FBti0019181	TIR	hobo	1405	3.36	absent	very rare
FBti0019659	TIR	hobo	1405	3.18	absent	very rare
FBti0019654	TIR	hobo	1405	3.23	absent	very rare
FBti0019459	TIR	hobo	1405	0	absent	very rare
FBti0019456	TIR	hobo	1405	1.89	absent	very rare
FBti0019424	TIR	hobo	1405	1.55	absent	very rare
FBti0020306	TIR	hopper	1429	0	polymorphic	common
FBti0019624	TIR	hopper	1434	3.28	absent	common
FBti0019677	TIR	hopper	527	3.15	fixed	fixed
FBti0019601	TIR	hopper	1432	2.88	polymorphic	rare
FBti0020381	TIR	hopper	1435	0.93	absent	very rare
FBti0018999	TIR	mariner2	982	0	polymorphic	common
FBti0019239	TIR	mariner2	878	0	fixed	fixed
FBti0019235	TIR	mariner2	554	0	fixed	fixed
FBti0018998	TIR	mariner2	778	0	fixed	fixed
FBti0020427	TIR	mariner2	278	0	fixed	fixed
FBti0019513	TIR	mariner2	434	0	fixed	fixed
FBti0020428	TIR	mariner2	755	0	fixed	fixed
FBti0019697	TIR	mariner2	557	3.11	fixed	fixed
FBti0020006	TIR	pogo	1146	0	absent	common
FBti0019012	TIR	pogo	1147	1.91	absent	common

FBti0019360	TIR	pogo	2121	0	absent	common
FBti0019211	TIR	pogo	185	0	absent	rare
FBti0019194	TIR	pogo	2122	0	polymorphic	rare
FBti0019112	TIR	pogo	2121	2.54	absent	rare
FBti0019134	TIR	pogo	1355	3.41	absent	rare
FBti0019379	TIR	pogo	185	0.46	absent	rare
FBti0020172	TIR	pogo	1066	0	absent	rare
FBti0019010	TIR	pogo	185	0.71	absent	rare
FBti0020096	TIR	pogo	1239	3.17	absent	rare
FBti0020020	TIR	pogo	185	2.83	absent	rare
FBti0019346	TIR	pogo	185	0	absent	rare
FBti0019549	TIR	pogo	185	1.94	absent	rare
FBti0019457	TIR	pogo	1145	1.89	absent	rare
FBti0019565	TIR	pogo	185	2.12	absent	rare
FBti0019071	TIR	pogo	185	3.44	absent	rare
FBti0019308	TIR	pogo	185	0	absent	very rare
FBti0019206	TIR	pogo	186	0	absent	very rare
FBti0019310	TIR	pogo	184	0	absent	very rare
FBti0019306	TIR	pogo	185	0	absent	very rare
FBti0019188	TIR	pogo	185	3.19	absent	very rare
FBti0019155	TIR	pogo	185	3.59	absent	very rare
FBti0019116	TIR	pogo	185	2.64	absent	very rare
FBti0019009	TIR	pogo	185	0.11	absent	very rare
FBti0019011	TIR	pogo	1141	0.78	absent	very rare
FBti0019013	TIR	pogo	185	1.91	absent	very rare
FBti0019365	TIR	pogo	2119	0.13	absent	very rare
FBti0019087	TIR	pogo	185	3.32	absent	very rare
FBti0019427	TIR	pogo	184	1.59	absent	very rare
FBti0019276	TIR	S-element	1734	0	polymorphic	common
FBti0020146	TIR	S-element	545	2.71	polymorphic	common
FBti0019294	TIR	S-element	1703	0	polymorphic	common
FBti0019319	TIR	S-element	342	0	poly/fixed	common
FBti0019245	TIR	S-element	299	0	fixed	fixed
FBti0019127	TIR	S-element	508	3.17	fixed	fixed
FBti0020217	TIR	S-element	214	0	fixed	fixed
FBti0019274	TIR	S-element	327	0	fixed	fixed
FBti0019287	TIR	S-element	976	0	fixed	fixed
FBti0019480	TIR	S-element	668	0	fixed	fixed
FBti0019512	TIR	S-element	220	0	fixed	fixed
FBti0019452	TIR	S-element	441	1.87	fixed	fixed
FBti0019667	TIR	S-element	666	3.16	fixed	fixed
FBti0019062	TIR	S-element	542	3.46	fixed	fixed
FBti0019362	TIR	S-element	605	0.02	fixed	fixed
FBti0020167	TIR	S-element	1732	0	absent	rare
FBti0020137	TIR	S-element	1731	2.75	absent	rare
FBti0020088	TIR	S-element	1733	3.19	absent	rare

FBti0019091	TIR	S-element	1730	3.29	absent	rare
FBti0020026	TIR	S-element	1733	2.95	absent	very rare
FBti0019124	TIR	S2	206	2.98	fixed	fixed
FBti0019399	TIR	S2	380	1.01	fixed	fixed
FBti0020231	TIR	S2	1061	0	fixed	fixed
FBti0059664	TIR	S2	988	0	fixed	fixed
FBti0018940	TIR	S2	218	2.14	fixed	fixed
FBti0019289	TIR	S2	942	0	fixed	fixed
FBti0019721	TIR	S2	630	3.06	fixed	fixed
FBti0019197	TIR	Tc1	610	0	fixed	fixed
FBti0018944	TIR	Tc1	1653	0	fixed	fixed
FBti0018945	TIR	Tc1	741	1.35	fixed	fixed
FBti0020191	TIR	Tc1	551	0	fixed	fixed
FBti0019297	TIR	Tc1	1133	0	fixed	fixed
FBti0019302	TIR	Tc1	1632	0	fixed	fixed
FBti0020441	TIR	Tc1	1429	0	fixed	fixed
FBti0019510	TIR	Tc1	615	0	fixed	fixed
FBti0019511	TIR	Tc1	1401	0	fixed	fixed
FBti0019497	TIR	Tc1	597	0	fixed	fixed
FBti0019090	TIR	Tc1	1623	3.29	fixed	fixed
FBti0020114	TIR	transib	1610	3.01	polymorphic	common
FBti0019081	TIR	transib	1463	3.37	absent	common
FBti0019035	TIR	transib	1097	0	fixed	fixed
FBti0019501	TIR	transib	965	0	fixed	fixed
FBti0019594	TIR	transib	423	2.7	fixed	fixed
FBti0019657	TIR	transib	1462	3.22	absent	rare

*poly/fixed: L-R primer pair gives a presence band, but the FL-R primer pair fails to give any band at all, we conclude that the element is present (*i.e.* either polymorphic or fixed), but cannot tell whether it is fixed in the pool

Absent/poly: the only band we have is an absence band in FL-R, but the lack of a presence band is not confirmed by a presence band either in the FL-R or in the L-R control, we conclude that the element is not fixed (*i.e.* either absent or polymorphic) in the pool, but cannot tell whether it is entirely absent

Table S2. Comparison of the two datasets used in this study with all the TEs and with the equivalent set of TEs annotated in the R5.

Classes	All selected TEs (755)		Polymorphic TEs (637)		All annotated TEs R5.23 (5424)		Non-Nested, non-INE-1 and > 100 bp euchromatic TEs[a] (1501)	
Order								
TIR	21%	157	15%	93	56%	3046	26%	395
LTR	47%	360	54%	344	24%	1321	41%	607
non-LTR	32%	238	31%	200	20%	1057	33%	499
Length								
Near full-length[b]	47%	338	55%	331	11%	585	29%	415
Medium length[c]	32%	226	27%	161	40%	2051	32%	470
Small length[d]	21%	154	18%	110	49%	2520	39%	559
Distance to nearest gene								
>10kb	9%	66	9%	58	18%	956	16%	246
1- 10kb	25%	186	25%	158	26%	1408	25%	377
<1 kb	19%	142	17%	107	16%	872	18%	276
Overlap genes	48%	361	49%	314	40%	2188	40%	602
Recombination background								
0 cM/Mb	29%	215	20%	129	65%	3545	39%	585
< 1.4 cM/Mb	12%	93	13%	81	14%	729	18%	272
≥ 1.4 cM/Mb	59%	447	67%	427	21%	1150	43%	644

[a]Euchromatic limits estimates based on Haddrill et al. (2007). [b]>90% of the canonical length and <30bp longer than the canonical length. [c]20- 90% of the canonical length. [d]<20% of he canonical length

Table S3. New frequency estimates for 57 of the 69 TEs analyzed in Petrov et al. (2003).

Flybase ID (Release3)	TE name[a]	Frequency estimates[a]	Family	New frequency estimates
FBti0020042	3565J	0.08	Jockey	common
FBti0020056	3560BS-1	0.06	BS	common
FBti0019632	3488X	0.63	X	common
FBti0020089	3546X	0.13	X	common
FBti0018879	3457BS	0.73	BS	common
FBti0019410	3730BS	0.38	BS	common
FBti0019604	3443BS	0.5	BS	common
FBti0020057	3560BS-2	0.59	BS	common
FBti0019133	3618BS	0.53	BS	common
FBti0019388	3717BS	0.13	BS	rare
FBti0019451	3766J	0	Jockey	rare
FBti0020084	3551J-1	0	Jockey	rare
FBti0019589	3437Doc	0	Doc	rare
FBti0020053	3561Doc-2	0	Doc	rare
FBti0018992	3801J	0	Jockey	rare
FBti0018996	3457J-1	0	Jockey	rare
FBti0019448	3764J-1	0.07	Jockey	rare
FBti0020092	3545J	0	Jockey	rare
FBti0018990	3804J	0	Jockey	rare
FBti0019599	3441J	0.06	Jockey	rare

FBti0020107	3535X	0	X	rare
FBti0018993	3794J	0	Jockey	rare
FBti0019453	3769J-2	0	Jockey	rare
FBti0019579	3434J	0	Jockey	rare
FBti0019606	3445J	0	Jockey	rare
FBti0019609	3447J	0	Jockey	rare
FBti0020030	3478J	0	Jockey	rare
FBti0020083	3551J-2	0	Jockey	rare
FBti0018997	3458J	0	Jockey	rare
FBti0019454	3769J-1	0.12	Jockey	rare
FBti0019570	3432J-1	0	Jockey	rare
FBti0020111	3533Doc	0	Doc	rare
FBti0019426	3748BS	0.08	BS	rare
FBti0019070	3503J	0.06	Jockey	very rare
FBti0019125	3609Doc	0	Doc	very rare
FBti0019449	3764J-2	0	Jockey	very rare
FBti0020081	3551Doc	0	Doc	very rare
FBti0020054	3561Doc-1	0	Doc	very rare
FBti0019045	3492J-2	0	Jockey	very rare
FBti0018991	3803J	0.06	Jockey	very rare
FBti0018994	3457J-2	0	Jockey	very rare
FBti0018995	3457J-3	0	Jockey	very rare
FBti0019046	3492J-1	0	Jockey	very rare

FBti0019058	3496Doc	0	Doc	very rare
FBti0019105	3585J	0	Jockey	very rare
FBti0019122	3575J	0	Jockey	very rare
FBti0019142	3624J	0	Jockey	very rare
FBti0019423	3746J	0	Jockey	very rare
FBti0019428	3749Doc-2	0	Doc	very rare
FBti0019429	3749Doc-1	0	Doc	very rare
FBti0019573	3432J-2	0	Jockey	very rare
FBti0019583	3435Doc	0	Doc	very rare
FBti0020029	3477Doc	0	Doc	very rare
FBti0020075	3552J	0	Jockey	very rare
FBti0020077	3552Doc	0	Doc	very rare
FBti0020087	3548Doc	0	Doc	very rare
FBti0020095	3544Doc	0	Doc	very rare

[a]Petrov et al. (2003)

Table S4. Distribution of TE frequencies by family, order and chromosome.

(A) TE frequencies by family

Family	Frequency classes				Total
	Fixed	Common	Rare	Very rare	
roo	2	2	8	78	90
jockey	0	1	31	23	55
Doc	2	1	7	33	43
297	2	2	9	23	36
1360	12	7	13	2	34
pogo	0	3	14	13	30
F-element	0	2	9	15	26
412	0	0	1	23	24
BS	2	14	5	2	23
mdg	0	0	3	19	22
copia	0	0	5	16	21
Rt1	1	4	12	4	21
blood	0	0	0	20	20
S-element	11	4	4	1	20
Tirant	0	0	1	18	19
G	11	2	2	2	17
flea	0	0	2	14	16
opus	0	0	1	15	16
Cr1a	12	3	0	0	15

hobo	1	0	2	11	14
I-element	2	0	0	10	12
Stalker	1	0	1	10	12
Burdock	0	0	3	8	11
Tc1	11	0	0	0	11
X-element	4	4	2	0	10
FB	3	1	3	2	9
HB	7	2	0	0	9
invader	4	5	0	0	9
17.6	0	0	3	5	8
diver	0	0	0	8	8
mariner2	7	1	0	0	8
gypsy	3	0	2	2	7
HMS-Beagle	0	0	0	7	7
Juan	0	0	6	1	7
S2	7	0	0	0	7
transib	3	2	1	0	6
hopper	1	2	1	1	5
Quasimodo	0	0	3	2	5
springer	0	0	1	4	5
Transpac	0	0	0	5	5
3S18	0	0	0	4	4
Bari	1	1	0	2	4

Idefix	1	1	1	1	4
Ivk	1	0	1	1	3
rover	0	0	1	2	3
Tabor	0	0	0	3	3
baggins	0	2	0	0	2
R1-element	0	2	0	0	2
1731	0	1	0	0	1
accord	0	0	1	0	1
frogger	0	1	0	0	1
G-element	1	0	0	0	1
Helena	1	0	0	0	1
micropia	0	1	0	0	1
McClintock	0	1	0	0	1
% (number)	15.10% (114)	9.54% (72)	21.06% (159)	54.30% (410)	100% (755)

(B) TE frequencies by order

Order	Frequency classes				Total
	Fixed	Common	Rare	Very rare	
LTR	13	14	46	287	360
non-LTR	37	35	75	91	238
TIR	64	23	38	32	157
Total	114	72	159	410	755

(C) TE frequencies by chromosomal arm.

Frequency classes	Chromosomal arm						
	X	**2L**	**2R**	**3L**	**3R**	**4**	**Total**
Fixed	17	17	17	17	24	22	114
Common	14	11	11	19	15	2	72
Rare	32	16	30	43	38	0	159
Very rare	84	93	63	70	98	2	410
Total	147	137	121	149	175	26	755

Table S5. Comparison of the mean frequency for TEs located on the X chromosome *vs* the autosomes.

Family	**Statistc**	***P-value***[a]
1360	0.11	0.92
297	-0.18	0.86
412	1.00	0.36
Doc	0.33	0.76
jockey	-0.56	0.56
pogo	0.38	0.73
roo	-0.06	0.95
Tirant	1.00	0.39

[a]*P-value* from the Student t-test comparing the mean TE frequency on the X chromosome *vs* the autosomes

Table S6. Frequency distributions of near full-length and full length TEs for all the TEs and for those families for which the χ^2 test could be performed.

Datasets		Very rare	Rare	Common	Total	*P-value*[a]
All TEs	**Near full-length**[b]	92	11	1	104	0.06
	Full-length[c]	123	24	6	158	
roo	**Near full-length**	26	1	0	27	0.47
	Full-length	28	2	0	30	
copia	**Near full-length**	1	0	0	1	0.25
	Full-length	13	4	0	17	
Burdock	**Near full-length**	1	0	0	1	0.30
	Full-length	4	2	0	6	
pogo	**Near full-length**	1	0	0	1	0.26
	Full-length	0	2	1	3	
Tirant	**Near full-length**	11	0	0	11	0.38
	Full-length	5	1	0	6	
412	**Near full-length**	14	1	0	15	0.28
	Full-length	5	0	0	5	
297	**Near full-length**	6	4	0	10	0.20
	Full-length	4	0	0	4	
Doc	**Near full-length**	21	2	0	23	0.06
	Full-length	1	0	0	1	

[a]*P-value* from the χ^2 test comparing common *vs* rare and very rare elements
[b]We consider an element to be full length when its size is equal or less than 30bp longer than the length of the canonical element in the family.
[c]We consider an element to be near-full length when it is >90% but less than 100% the size of the canonical element in the family

Table S7. Bootstrap analyses of the regression coefficients (coef) for LTR, non-LTR and TIR elements. For each TE order, 100 TEs where extracted 100 times.

Terms	LTR			non-LTR			TIR		
	Coef	**[min coef-max coef]**	***P-value***	**Coef**	**[min coef-max coef]**	***P-value***	**Coef**	**[min coef-max coef]**	***P-value***
Poly[a] copy number	-6.71e-04	[-2.67e-03-(-3.51e-04)]	0.41	-1.49e-02	[-0.02 – (-0.01)]	8.49e-08***	-1.48e-02	[-0.02-(-0.005)]	0.12
TE length	-7.18e-05	[-7.57e-05-(-3.96e-05)]	2.18e-11***	-1.25e-04	[1.36e-04 – (-1.08e-04)]	5.65e-07***	7.86e-05	[7.66e-05-1.24e-04]	3.54e-01
Rcb[b] rate	-6.24e-02	[-0.071-(-0.042)]	8.01e-04***	-4.12e-02	[-0.04 – (-1.12e-04)]	0.236	-9.43e-02	[-0.105-(-0.034)]	0.115

[a]Polymorphic

[b]Recombination

Table S8. Partial correlation analyses within families for the 593 out of the 755 TEs that are not fixed, are not located on the 4th chromosome and belong to families with a copy number larger or equal to five. Note that analyses with thresholds larger than five such as 10 or 15 copies did not change the results (data not shown).

Partial correlation analyses	All	LTR	non-LTR	TIR
Frequency ~ poly[a] copy number | TE length, rcb[b] rate	1.17e-03***	0.41	2.00 e-08***	0.11
Frequency ~ TE length | poly copy number, rcb rate	6.90e-34***	4.34e-12***	2.29e-07***	0.35
Frequency ~ rcb rate | poly copy number, TE length	1.22e-04***	7.18e-04***	0.23	0.11

[a]Polymorphic

[b]Recombination

Table S9. Family and order effect on the TE frequency (Sign tests). *S* is the number of cases when d (TE_{focal},TE_{same}) – d (TE_{focal},TE_{diff})>0.

Order	**Family and order effects: different family (same or different order) vs same family**		**Family effect: same order and different family vs same family**		**Order effect: different order vs same order and different family**	
	S	***P-value***	***S***	***P-value***	***S***	***P-value***
ALL	92	1.41e-6	79	7.94e-11	155	0.136
LTR	37	3.60e-3	31	4.62e-4	52	1.04e-5
non-LTR	35	2.32e-3	32	5.06e-7	80	1
TIR	20	9.17e-3	16	1.06e-2	23	0.39

Table S10. Relationship between TE length, recombination (rcb) rate and fixed copy number with TE frequencies.

Order		All		LTR		non-LTR		TIR	
Linear regression analysis of the ANOVA model: frequency ~ TE length * rcb rate * fixed copy number		**Coef.**	***P-value***	**Coef.**	***P-value***	**Coef.**	***P-value***	**Coef.**	***P-value***
Frequency ~	**fixed copy number**	7.58e-02	7.65e-07***	2.40e-01	2.01e-04***	1.40e-01	0.53	1.14e-01	8.30e-04***
	TE length	-9.09e-05	5.50e-09***	6.01e-05	5.80e-03***	-8.02e-05	0.10	3.67e-04	0.03*
	Rcb rate	-3.56e-02	0.31	-8.09e-02	0.09	-4.42e-02	4.45e-04***	4.09e-02	0.71
	TE length : rcb rate	1.07e-06	0.86	6.83e-06	0.37	1.02e-05	0.58	-6.42e-05	0.43
	Rcb rate : fixed copy number	-1.19e-02	0.045*	-1.67e-02	0.33	-2.33e-02	0.10	-8.16e-03	0.42
	TE length : fixed copy number	1.03e-06	0.83	-1.92e-05	0.31	-3.26e-05	0.03*	-4.23e-05	0.07

Table S11. Test of the independent effect of each individual parameter.

(A) Effect of adding parameters one at a time to a starting model (Model 1) in which a constant value for the frequency is assigned.

	ANOVA models	Df	Sum of Squares	Residual sum of squares	*F-test*	*P-value*
Model 1		N/A	N/A	298.65	N/A	N/A
Model 2	**Model 1 + recombination rate**	1	5.91	292.74	12.83	3.68e-04***
Model 3	**Model 1 + distance to closest gene**	1	0.94	297.71	2.00	0.16
Model 4	**Model 1 + TE length**	1	63.89	234.76	172.82	< 2.20e-16***
Model 5	**Model 1 + mean TE length**	1	75.82	222.84	216.04	< 2.20e-16***
Model 6	**Model 1 + canonical TE length**	1	52.25	246.40	134.65	< 2.20e-16***
Model 7	**Model 1 + fixed copy number**	1	37.89	260.76	92.27	< 2.20e-16***
Model 8	**Model 1 + polymorphic copy number**	1	15.63	283.02	35.08	5.19e-09***
Model 9	**Model 1 + chromosome (X *vs* autosomes)**	1	0.10	298.64	0.02	0.88

Model 10	**Model 1 + order**	3	52.87	245.78	45.39	< 2.20e-16***
Model 11	**Model 1 + family**	50	163.71	134.94	14.22	< 2.20e-16***

(B) Effect of dropping one parameter at a time starting with a model (Model 10) that considers all the parameters.

	ANOVA models	**Df**	**Sum of Squares**	**Residual sum of squares**	***F-test***	***P-value***
Model 10	**frequency ~ rcb rate + distance to closest gene+ TE length + mean TE length + canonical TE length + poly copy number + fixed copy number + order + chromosome (X *vs* autosomes)**	N/A	N/A	129.88	N/A	N/A
Model 11	**Model 10 - recombination rate**	1	4.85	193.32	16.07	6.84e-05***
Model 12	**Model 10 - distance to closest gene**	1	0.05	188.52	0.15	0.70
Model 13	**Model 10 - TE length**	1	3.77	192.24	12.51	4.34e-04***
Model 14	**Model 10 - mean TE length**	1	13.12	201.59	43.52	8.97e-11***
Model 15	**Model 10 - canonical TE length**	1	7.01	195.48	33.45	1.79e-06***
Model 16	**Model 10 - fixed copy number**	1	18.39	206.86	60.97	2.45e-14***

Model 17	**Model 10 - polymorphic copy number**	1	7.09	195.56	23.50	1.58e-06***
Model 18	**Model 10 - chromosome (X *vs* autosomes)**	1	0.47	188.94	1.55	0.21
Model 19	**Model 10 - order**	3	0.28	188.75	0.31	0.82