

23. IGD: A Resssourcefor Humanintronlessgenes

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We present a new curated database of intronless genes in Human genome called IGD (Intronless Gene Database) based on GenBank data. The current version of IGD contains 1192 entries. We provide some features these entries: chromosomal location, functional classification and involvement in genetic diseases.

Intronless genes (IGs) represent between 3 to 10% of superior eukaryote genes. Although many databases on exons and introns exist, there is no curated database for such genes which will allow to study them in a concerted manner. Such a database will be useful to discover new features of these genes. Here we present a new database of IGs in Human based on GenBank data. This database, which we call IGD (Intronless Gene Database), is a collection of gene sequences that are annotated and curated to have single exon structure in Genbank. The current version of IGD contains 1192 IGs.

Some features of the entries were studied and we find very interesting results concerning the functional and chromosomal distribution of the human IGs. For example we found that most IGs are genes involved in signal transduction which major class are GPCRs. Moreover, chromosomes 1 and 11 seem to have unexpectedly small and large number of IGs, respectively. Other features of human IGs (composition, codon usage, etc.) are under study. they may bring new light on the characteristics of this class of genes and allow the design of improved programs for their prediction.