

TABLE 27.13. Types of molecular homology

Type of Homology	Description
Homologs	Genes that are descended from a common ancestor (e.g., all globins)
Orthologs	Homologous genes that have diverged from each other after speciation events (e.g., human β -globin and chimp β -globin)
Paralogs	Homologous genes that have diverged from each other after gene duplication events (e.g., β - and γ -globin)
Xenologs	Homologous genes that have diverged from each other after lateral gene transfer events (e.g., antibiotic resistance genes in bacteria)
Positional homology	Specific amino acid or nucleotide positions in different proteins or genes that have a common ancestor; frequently represented by sequence alignments

Based on Eisen J.A. 1998. *Genome Res.* **8**: 163–167, Table 2, © 1998 CSHLP.