

## gene (cistron)

Structurally, a basic unit of hereditary material; an ordered sequence of nucleotide bases that encodes one polypeptide chain (via mRNA). The gene includes, however, regions preceding and following the coding region (leader and trailer) as well as (in eukaryotes) intervening sequences (introns) between individual coding segments (exons). Functionally, the gene is defined by the *cis-trans* test that determines whether independent mutations of the same phenotype occur within a single gene or in several genes involved in the same function.

### **Source:**

PAC, 1992, 64, 143 (*Glossary for chemists of terms used in biotechnology (IUPAC Recommendations 1992)*) on page 154