

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.

1992, 64, 154