Chromosome

Chromosomes are long, thread-like structures within the nucleus of human cells that contain genetic information in the form of DNA. Each chromosome has a long arm (referred to as the q arm) and a short arm (referred to as the p arm), which are separated by a central region called the centromere.

A chromosome is packaged and organized chromatin, a complex of macromolecules found in cells, consisting of DNA, protein, and RNA. The main information-carrying macromolecule is a single piece of coiled double-stranded DNA, containing many genes, regulatory elements, and other non-coding DNA. The DNA-bound macromolecules are proteins, which serve to package the DNA and control its functions. Chromosomes vary widely between different organisms. Some species also contain plasmids or other extrachromosomal DNA.

There are two types of chromosomes: autosomes and sex chromosomes. The sex chromosomes (X and Y) determine an individual's biological sex, while autosomes contain genes responsible for various traits and characteristics unrelated to sex determination.

Chromosome 1

Chromosome 2

Chromosome 3

Chromosome 14

Chromosome 21