

Golgi apparatus

Major Cell Structures

Cell Structure	Description / Function
Membranous	
Plasma membrane	Serves as a boundary of the cell, maintaining its integrity; protein molecules embedded in plasma membrane perform various functions.
Endoplasmic reticulum	Ribosomes attached to rough ER synthesize proteins that leave cells via the Golgi complex; smooth ER synthesizes lipids incorporated in cell membranes, steroid hormones, and certain carbohydrates used to form glycoproteins.
Golgi apparatus	Composed of membranous sacs; synthesizes carbohydrates, combines it with protein, and packages the product as globules of glycoprotein.
Lysosomes	A cell's "digestive system"
Peroxisomes	Contain enzymes that detoxify harmful substances
Mitochondria	Double membranous structure; catabolism; ATP synthesis; a cell's "power plants"
Nucleus	Houses the genetic code, which in turn dictates protein synthesis.
Nonmembranous	
Ribosomes	Site of mRNA attachment and amino acid assembly (<i>protein synthesis</i>)
Cytoskeleton	Acts as a framework to support the cell and its organelles; functions in cell movement; forms cell extensions (<i>microvilli, cilia, flagella</i>)
Nucleolus	Plays an essential role in the formation of ribosomes