

Q - write an account on Types of Ribosomes? (5)

The ribosomes have 3 types depending on the size & sedimentation coefficient. They are -

1) 80S 2) 70S 3) 55S Ribosomes.

1) 80S - It is found in Eukaryotic cells, plants & animals. It has sedimentation coefficient 80S & diameter 23 nm. It has 2 subunits 60S & 40S. The 60S subunit consist of 28S, 5S & 5.8S RNA & 45 proteins while 40S subunit contain 18S RNA & 33 proteins. The association & dissociation of subunits depends on the concentration of Mg^{++} in cytoplasm.

2) 70S - They are smaller than 80S ribosomes. It is present in prokaryotic cells. 70S has diameter of 18 nm. It has 2 subunits 50S & 30S. The larger subunit contains 23S, 5S RNA & 31 proteins while smaller subunit 30S contain 16S RNA & 21 proteins. It mainly requires Mg^{++} .

3) 55S - Mitochondria & chloroplasts contain these ribosomes. The sedimentation coefficient is 55S. It has 2 subunits. The larger subunit called 40S & smaller 30S.

The larger subunit contains 16S RNA & smaller subunit 12S RNA.

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