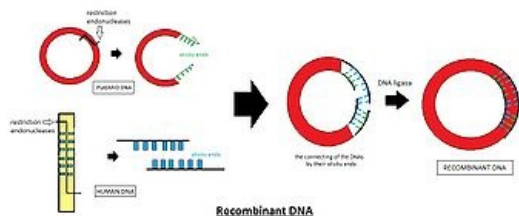


Recombinant DNA

- Recombinant DNA is an **artificially produced** DNA.
- It is usually formed by more DNA sources from the different donor.
- The **sticky ends** can put together the individual strands of the DNA.
- The *restriction endonucleases* cut the DNA out and *DNA ligase* incorporates it.
- For the recombination we need many and many copies of the DNA. That is the reason for using the **PCR – polymerase chain reaction**.
- To incorporate the sample of the DNA into the host cell it is necessary to use the **vector**.
- After replication in the host cell – on the issue culture – we can work with **the exact part of the DNA**.
- The recombinant DNA is much used in the gene manipulation. Thanks to it we are able to produce some important human hormones and enzymes.
- The clones of the DNA samples can be also used for the forming of the gene maps.

The Process of the DNA Recombination

1. to isolate the exact part of the DNA from the organism
2. to put the DNA into the DNA vector (E.coli, bacteria, yeast)
3. to transfer the vector by into the host
4. to find out the compatible **sticky ends** of two DNA strands
5. to put it together by DNA ligase
6. to clone the new DNA by PCR – polymerase chain reaction
7. to get many copies of the recombinant DNA



Recombinant DNA

Links

Related articles

- Vector
- PCR
- DNA ligase
- Gene Manipulation

Sources

- Recombinant DNA (<http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/R/RecombinantDNA.html>)

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