## **Restriction Analysis**

From this chapter you can learn how to search for restriction sites on a DNA sequence.

The restriction sites found are stored as automatic annotations. This means that if the automatic annotations highlighting is enabled then the restiction sites are searched and highlighted for each nucleotide sequence opened. Refer Automatic Annotations Highlighting to learn more.

Open a DNA sequence in and click the following button on the Sequence View toolbar:

Alternatively, select either the Actions Analyze Find restriction sites item in the main menu or the Analyze Find restriction sites item in the context menu.

The Find restriction sites dialog appears:

• Find Restriction Sites				8
Filter by name:				Open enzymes
Name Y Accession Type	Sequence	Organizm / Details	_	Export enzymes
<ul> <li>▷ B (2, 917)</li> <li>▷ C (1, 193)</li> </ul>		Bacl BvuBl	=	Select All
▷ D (1, 31)		Daql Dsp1l		Select None
<ul> <li>▷ F (0, 63)</li> <li>▷ F (0, 63)</li> </ul>		F-CphI F-TevIV		Select by length
▷ G (0, 23) ▷ H (1, 312)		Gall Gsul H-Drel Hsul		Invert selection
▷ I (0, 61) Selected enzymes:		I-AchMI I-Vdi141I	~	Load selection
BamHI,BglII,ClaI,DraI,EcoRI,EcoRV,HindIII,PstI,SalI,SmaI,XmaI				Save selection
				REBASE Info
Filter by number of results:				
Minimum hits:	1 🚖	Maximum hits:		2
Search in:				
Region Whole sequence	0	]1-		199950
	🗆 Exclude	1-		199950
Total number of enzymes: 4862, selected 11				
Help			Can	cel OK

You can see the list of restriction enzymes that can be used to search for restriction sites. Also you can set a region to search for. The information about enzymes was obtained from the REBASE database. For each enzyme in the list a brief description is available (the accession ID in the database, the recognition sequence, etc.). If you're online you can get more detailed information about an enzyme selected by clicking the *REBASE Info* button.

- Selecting Restriction Enzymes
  Using Custom File with Enzymes
  Filtering by Number of Hits
  Excluding Region
  Circular Molecule
  Results