

# 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 restriction 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:

The dialog box titled "Find Restriction Sites" features a search filter, a table of enzymes, a list of selected enzymes, and search parameters. The table lists enzymes with columns for Name, Accession, Type, Sequence, and Organism / Details. The "Selected enzymes" field contains BamHI, BglII, ClaI, DraI, EcoRI, EcoRV, HindIII, PstI, SalI, SmaI, and XmaI. Search parameters include a region of "Whole sequence" from position 1 to 199950, with an option to exclude a region from 1 to 199950. The total number of enzymes is 4862, with 11 selected. Buttons for "Open enzymes", "Export enzymes", "Select All", "Select None", "Select by length", "Invert selection", "Load selection", "Save selection", "REBASE Info", "Help", "Cancel", and "OK" are present.

Name	Accession	Type	Sequence	Organism / Details
▷ A (0, 264)				Aaal .. Axyl
▷ B (2, 917)				Bacl .. BvuBI
▷ C (1, 193)				Cacl .. CvnI
▷ D (1, 31)				Daql .. Dsp1I
▷ E (2, 325)				Eacl .. EspHK30I
▷ F (0, 63)				F-CphI .. F-TevIV
▷ G (0, 23)				Gall .. Gsul
▷ H (1, 312)				H-Drel .. Hsul
▷ I (0, 61)				I-AchMI .. I-Vdi141I

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](#)