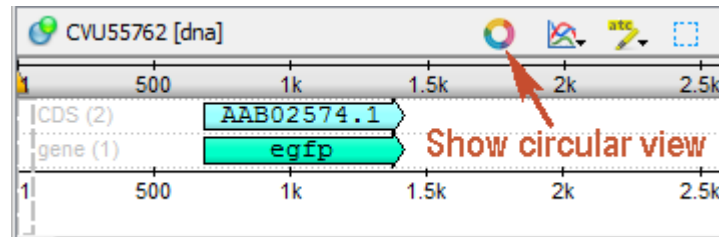


# Circular Viewer

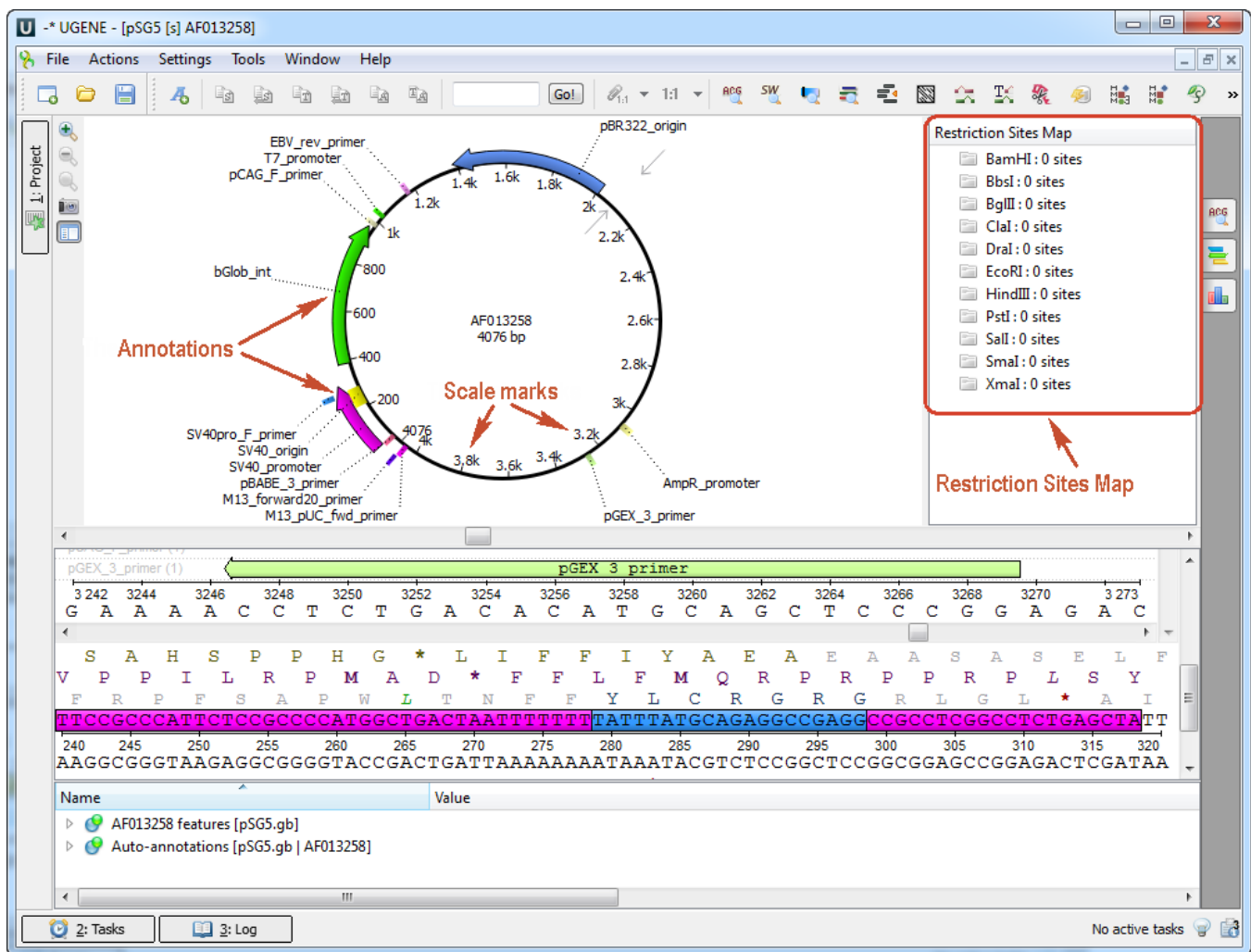
The *Circular Viewer* plugin provides the capability to show the circular view of a nucleotide sequence.

## Usage example:

Open a nucleotide sequence object in the *Sequence View*. The *Show circular view* button is available on the sequence toolbar:



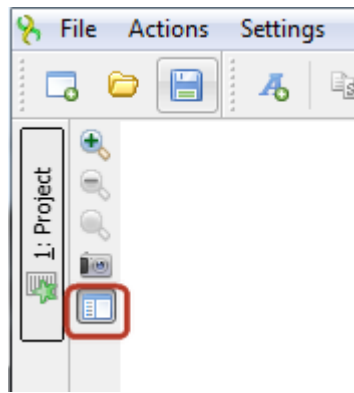
Pressing the button will show the circular view of the sequence:




If you work with a file with many sequences the button closes circular views if some circular views are opened and if all circular views are closed, it opens all of them.

Also, you can mark sequences as circular in UGENE by the *Mark as circular* sequence context menu item. When the sequences are marked as *Circular*, the Circular View is automatically opened for them in all opened Sequence View windows.

The *Restriction Sites Map* will appear automatically. To show restriction sites the *Show Restriction Sites* menu should be checked. To hide the map click on the following button:

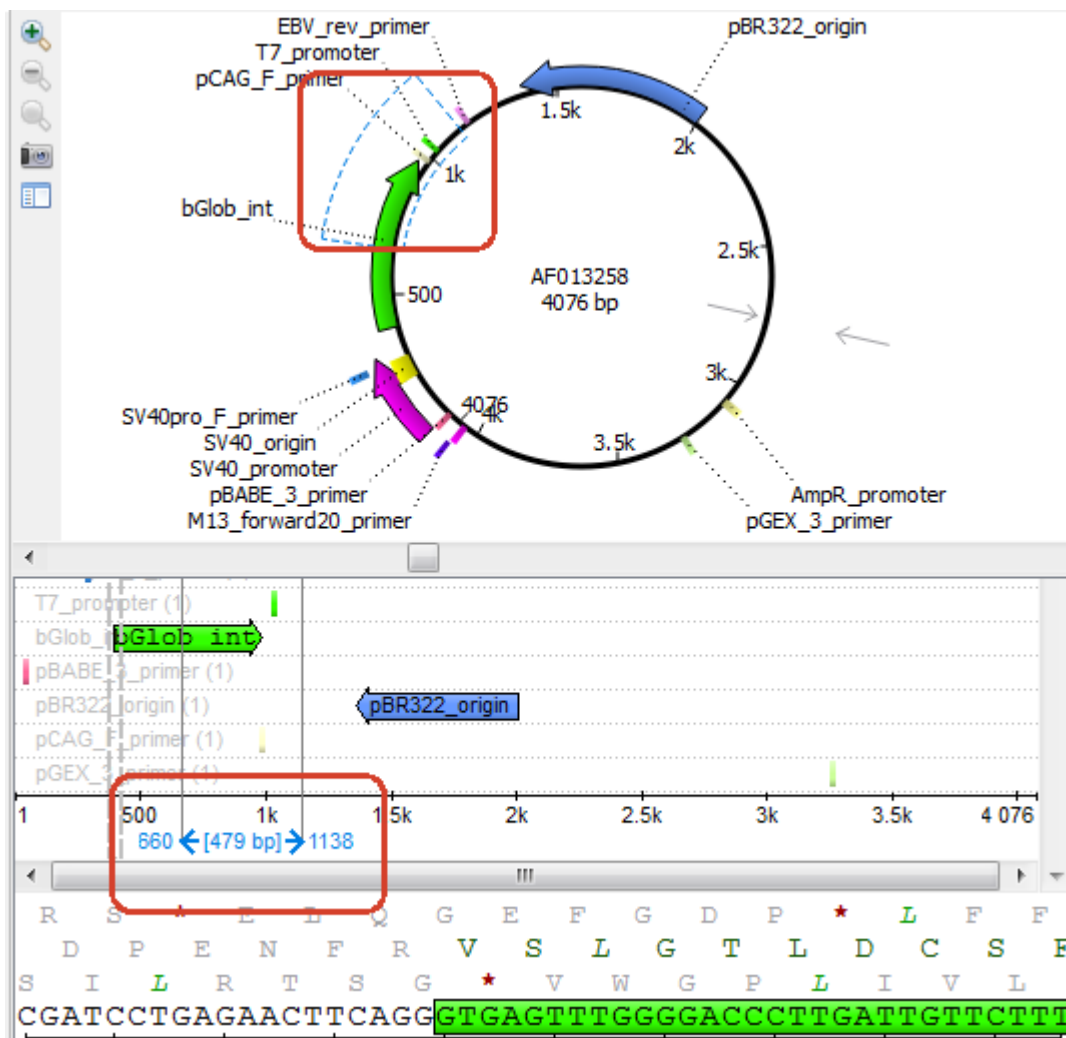


 The *Circular Viewer* has opened automatically when the *Sequence View* is opened for a plasmid.

The inner-circle represents the sequence clockwise and the scale marks show the corresponding sequence positions. The sequence annotations are represented as curved colored regions at the outer side of the circle.

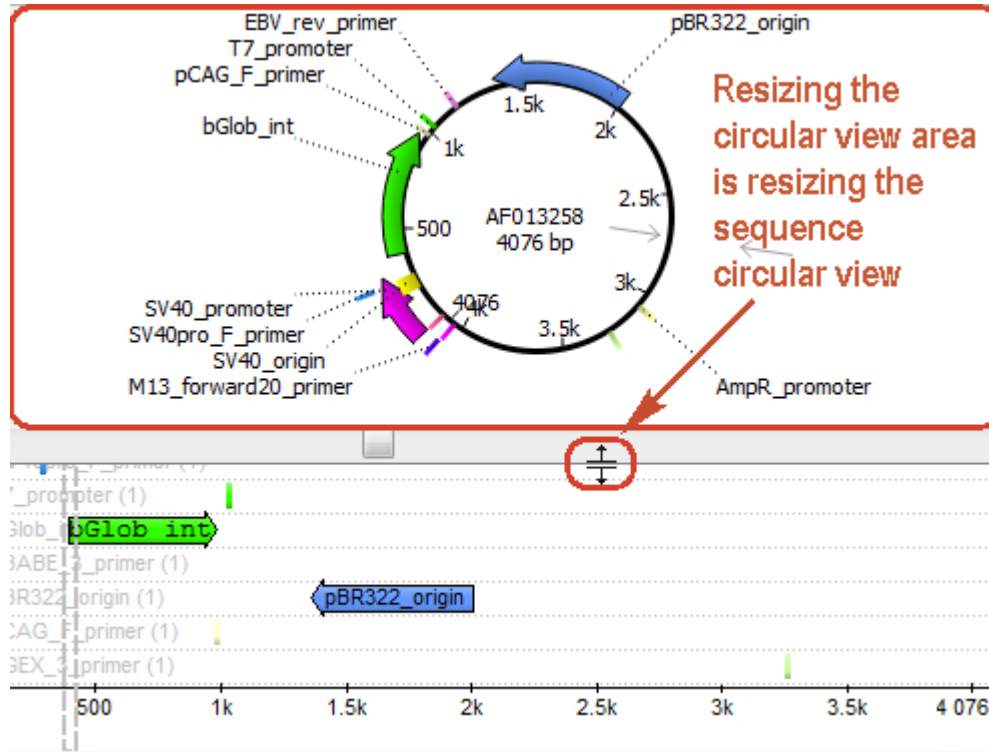
The *Circular Viewer* helps to navigate within the sequence. You can select an annotation on the circular view and the annotation will also be focused and highlighted in all *Sequence View* areas: *Sequence overview*, *Sequence zoom view*, *Sequence details view*, and *Annotations editor*.

You can also select a sequence region:



This will also affect the *Sequence View*. You can select a sequence region with *Ctrl* and the selection will be inverted.

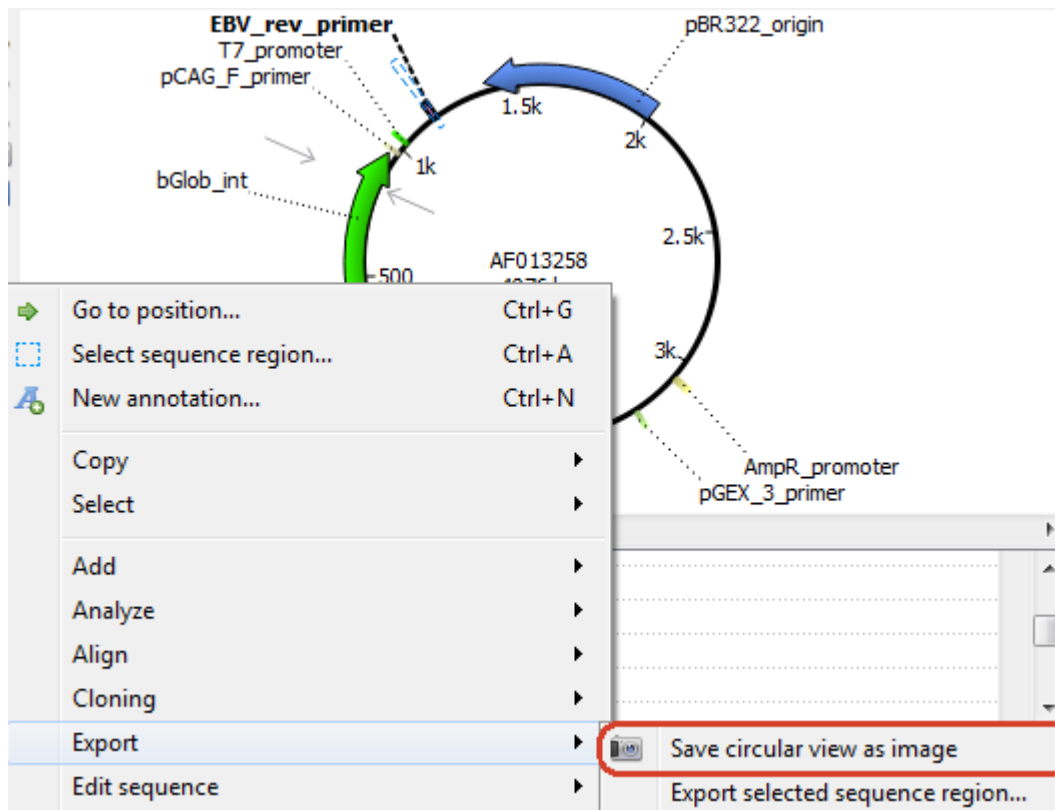
Note that the circular view is zoomed automatically when the *Circular Viewer* area is resized:



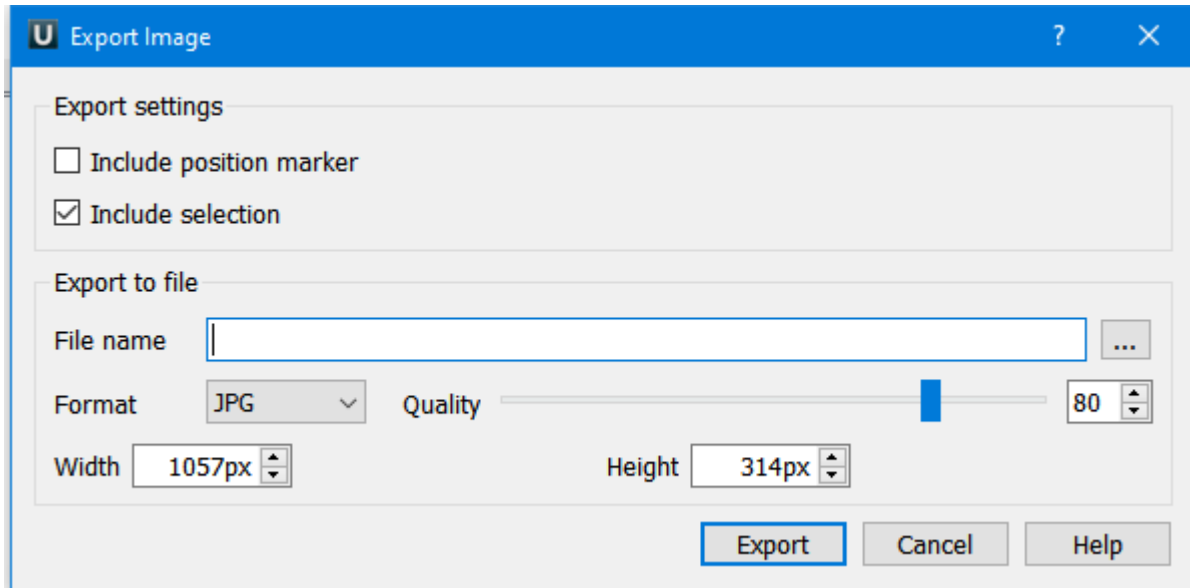
So you can adjust it to an appropriate size.

It is possible to rotate the circular view using the mouse wheel. Also, it is possible to shift the start point of a circular molecule by *Edit sequence* -> *Set new sequence origin* context menu item.

Use the *Export* -> *Save circular view as image* context menu or the *Actions* main menu item to save the image of the circular view.



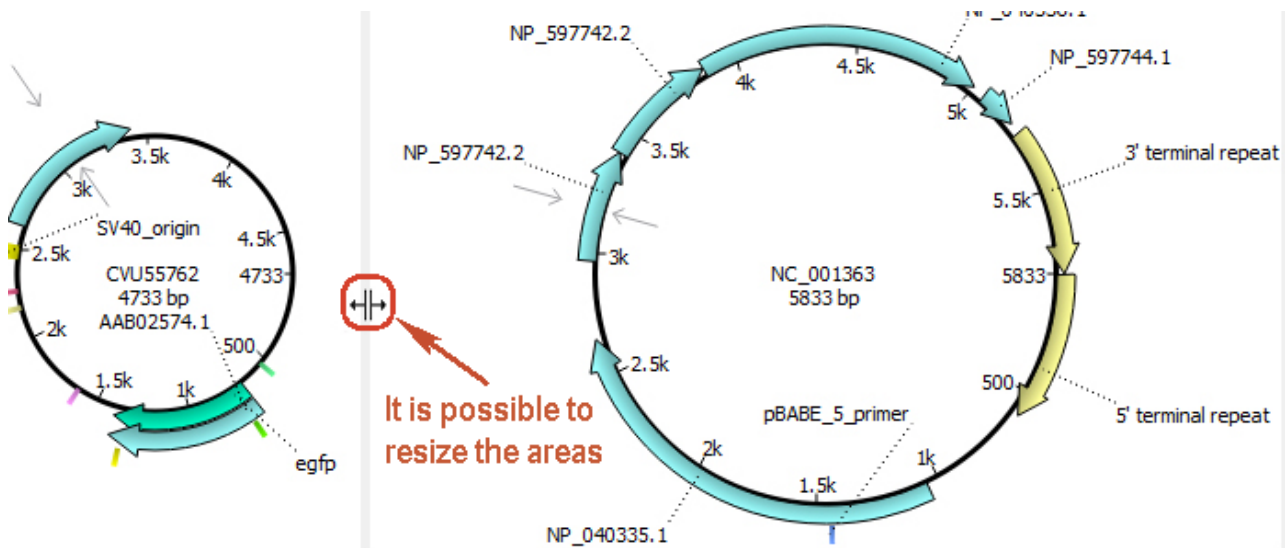
The *Export Image* dialog will appear:



You can set *Include position marker* and *Include selection* marker in the image by the corresponding checkboxes.

Here you can browse for the file name, and select the width, height, and resolution of the image as well as its format: SVG, BMP, JPG, PNG, PDF, PS, and TIFF. Pay attention to *Quality* slider, it is present for JPG format only.

Note, that if a sequence file contains several sequences it is possible to view the circular views of the sequences in the same *Circular Viewer* area.



You can work with these circular views at the same time.