

# Smith-Waterman Algorithm Element

The *element* uses the Smith-Waterman algorithm to search in the input sequence for regions similar to the specified pattern.

## Parameters in GUI

| Parameter             | Description                                                                                                                                                                                 | Default value             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Annotate As           | Name of the result annotations.                                                                                                                                                             | misc_feature              |
| Direction             | See the description <a href="#">here</a> .                                                                                                                                                  | Any                       |
| Algorithm             | Algorithm version. Depending on the computer configuration the following values may be available: <ul style="list-style-type: none"><li>• Classic 2</li><li>• SSE2</li><li>• CUDA</li></ul> | Classic 2                 |
| Filter results        | Results filtering strategy. The values available are: <ul style="list-style-type: none"><li>• filter-intersections</li><li>• none</li></ul>                                                 | filter-intersections      |
| Gap ext score         | Gap extension score.                                                                                                                                                                        | -1.00                     |
| Gap open score        | Gap open score.                                                                                                                                                                             | -10.00                    |
| Scoring matrix        | Specifies the scoring matrix to use.                                                                                                                                                        | Auto                      |
| Min score             | Percentage of matching between the pattern and the searched sequence region.                                                                                                                | 90%                       |
| Pattern               | The pattern to search for.                                                                                                                                                                  | You must specify a value! |
| Search in translation | Translates the nucleotide sequence supplied to a protein sequence and searches in the translated sequence.                                                                                  | False                     |

## Parameters in Schema File

Type: ssearch

| Parameter      | Parameter in the GUI  | Type                                                                                                                                                                               |
|----------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key            | Annotate As           | <i>string</i>                                                                                                                                                                      |
| algorithm      | Algorithm             | <i>string</i><br><br>Depending on the computer configuration the values available are: <ul style="list-style-type: none"><li>• "Classic 2"</li><li>• SSE2</li><li>• CUDA</li></ul> |
| filter         | Filter results        | <i>string</i><br><br>The values available are: <ul style="list-style-type: none"><li>• filter-intersections</li><li>• none</li></ul>                                               |
| gap-ext-score  | Gap ext score         | <i>numeric</i>                                                                                                                                                                     |
| gap-open-score | Gap open score        | <i>numeric</i>                                                                                                                                                                     |
| matrix         | Scoring matrix        | <i>string</i>                                                                                                                                                                      |
| min-score      | Min score             | <i>numeric</i>                                                                                                                                                                     |
| pattern        | Pattern               | <i>string</i>                                                                                                                                                                      |
| strand         | Direction             | <i>string</i><br><br>Available values are: <ul style="list-style-type: none"><li>• complement</li><li>• direct</li><li>• both</li></ul>                                            |
| translate      | Search in translation | <i>boolean</i>                                                                                                                                                                     |