

# Convert Frequency Matrix Element

Converts a frequency matrix to a weight matrix. Weight matrices are used for probabilistic recognition of transcription factor binding sites.

## Parameters in GUI

Parameter	Description	Default value
<b>Matrix type</b> (required)	Dinucleic matrices are more detailed, while mononucleic one are more useful for small input data sets.	Mononucleic
<b>Weight algorithm</b>	Different weight algorithms uses different functions to build weight matrices. It allows us to get better precision on different data sets. Log-odds, NLG and Match algorithms are sensitive to input matrices with zero values, so some of them may not work on those matrices.	Berg and Von Hippel

## Parameters in Workflow File

Type: `fmatrix-to-wmatrix`

Parameter	Parameter in the GUI	Type
<b>type</b>	<b>Matrix type</b>	<i>boolean</i> Available values are: <ul style="list-style-type: none"><li>• true - for Dinucleic</li><li>• false - for Mononucleic</li></ul>
<b>weight-algorithm</b>	<b>Weight algorithm</b>	<i>string</i> Available values are: <ul style="list-style-type: none"><li>• Berg and von Hippel</li><li>• Log-odds</li><li>• Match</li><li>• NLG</li></ul>

## Input/Output Ports

The element has 1 *input port*:

**Name in GUI:** *Frequency matrix*

**Name in Workflow File:** `in-fmatrix`

**Slots:**

Slot In GUI	Slot in Workflow File	Type
Frequency matrix	<code>fmatrix</code>	<i>fmatrix</i>

And 1 *output port*:

**Name in GUI:** *Weight matrix*

**Name in Workflow File:** `out-wmatrix`

**Slots:**

Slot In GUI	Slot in Workflow File	Type
Weight matrix	<code>wmatrix</code>	<i>wmatrix</i>