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| **BBTN-2018-0071.R2 supplemental**  |

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Supplemental figure 1: (A) Important residues of *Sinapis alba* myrosinase interacting with glucosinolate. Blue dotted lines show residues interacting with glucose, red dotted lines show residues interacting with aglycone and orange dotted line shows residue interacting with sulfate. (B) Important residues present at catalytic active site.

Supplemental table I: Myrosinase response to biotic stress. **↑**,increase and**↓**, decrease

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Plant species** | **Insect** | **Nature** | **myrosinase activity** | **myrosinase transcript** | **Reference** |
| *Brassica rapa* | *Plutella xylostella* | Specialist insect | **↑**(3-fold) | - | [1] |
| *Brassica napus* | *Plutella xylostella* | Specialist insect | - | **↓** | [2] |
| *Brassica napus* | *Plutella xylostella* | Specialist insect | **↑** (1.5-fold) | - | [2] |
| *Brassica napus* | *Plutella xylostella* | Specialist insect | **↓** | - | [2] |
| *Sinapis alba* | *Athalia rosae* | Specialist insect | **↑**(3-fold) | - | [3] |
| *Sinapis alba* | *Spodoptera frugiperda* | Generalist insect | = | - | [3] |
| *Arabidopsis thaliana* | *Brevicoryne brassicae* | Specialist aphid | - | **↓***TGG1 AND TGG2* | [4] |
| *Arabidopsis thaliana* | *Myzus persicae* | Generalist aphid | - | **↓***TGG1 AND TGG2* | [4] |
| *Brassica juncea* | *A. rosae* | Specialist insect | **↓** | - | [5] |
| *Brassica napus* | *Leptosphaeria maculans* | Specialist fungous | = | - | [6] |

Supplemental table II: Myrosinase response to abiotic stress. **↑**,increase and**↓**, decrease

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Plant species** | **Nature of stress** | **myrosinase activity** | **myrosinase transcript** | **Reference** |
| *Sinapis alba* | Wounding  | **↑** | - | [1] |
| *Thellungiella salsuginea* | Salt  | **↑** | - | [7] |
| *Raphanus sativus* | Abscisic acid |  | **↑** | [8] |
| *Raphanus sativus* | Methyl jasmonate |  | **↑** | [8] |
| *Raphanus sativus* | Hydrogen peroxide  |  | **↑** | [8] |
| *Raphanus sativus* | Wounding  |  | **↓** | [8] |
| *Raphanus sativus* | Light  | **↑** |  | [9] |
| *Brassica oleracea* | High salt  | **↓** |  | [10] |
| *Brassica oleracea* | Elevated CO2 | **↓** |  | [10] |
| *Arabidopsis thaliana* | Low temperature | - | **↓***TGG1 AND TGG2* | [11] |
| *Brassica napus* | Drought  | **↑** |  | [12] |
| *Arabidopsis thaliana* | Dark  | **↑** |  | [13] |
| Diplotaxis tenuifolia | Heat  |  | **↑** | [14] |

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