**Table S5:**

**Sequence and GO annotation information of SUS gene family members in *B. juncea*.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Gene ID | Accession number | GO:biological process | GO:cellular component | GO:molecular function |
| BjuSUS01 | BjuA009339 | MW370524 | GO:0046686|response to cadmium ion;GO:0009409|response to cold;GO:0009413|response to flooding;GO:0009749|response to glucose;GO:0001666|response to hypoxia;GO:0010555|response to mannitol;GO:0006970|response to osmotic stress;GO:0072708|response to sorbitol;GO:0009744|response to sucrose;GO:0009414|response to water deprivation;GO:0005985|sucrose metabolic process | GO:0005829|cytosol;GO:0009506|plasmodesma | GO:0016157|sucrose synthase activity |
| BjuSUS02 | BjuB015313 | MW370525 | GO:0046686|response to cadmium ion;GO:0009409|response to cold;GO:0009413|response to flooding;GO:0009749|response to glucose;GO:0001666|response to hypoxia;GO:0010555|response to mannitol;GO:0006970|response to osmotic stress;GO:0072708|response to sorbitol;GO:0009744|response to sucrose;GO:0009414|response to water deprivation;GO:0005985|sucrose metabolic process | GO:0005829|cytosol;GO:0009506|plasmodesma | GO:0016157|sucrose synthase activity |
| BjuSUS03 | BjuA047153 | MW370526 | GO:0046686|response to cadmium ion;GO:0009409|response to cold;GO:0009413|response to flooding;GO:0009749|response to glucose;GO:0001666|response to hypoxia;GO:0010555|response to mannitol;GO:0006970|response to osmotic stress;GO:0072708|response to sorbitol;GO:0009744|response to sucrose;GO:0009414|response to water deprivation;GO:0005985|sucrose metabolic process | GO:0005829|cytosol;GO:0009506|plasmodesma | GO:0016157|sucrose synthase activity |
| BjuSUS04 | BjuO008945 | MW370527 | GO:0046686|response to cadmium ion;GO:0009409|response to cold;GO:0009413|response to flooding;GO:0009749|response to glucose;GO:0001666|response to hypoxia;GO:0010555|response to mannitol;GO:0006970|response to osmotic stress;GO:0072708|response to sorbitol;GO:0009744|response to sucrose;GO:0009414|response to water deprivation;GO:0005985|sucrose metabolic process | GO:0005829|cytosol;GO:0009506|plasmodesma | GO:0016157|sucrose synthase activity |
| BjuSUS05 | BjuA023848 | MW370528 | GO:0001666|response to hypoxia;GO:0010431|seed maturation;GO:0005982|starch metabolic process;GO:0005985|sucrose metabolic process | GO:0005829|cytosol;GO:0016020|membrane;GO:0009505|plant-type cell wall;GO:0042170|plastid membrane | GO:0016157|sucrose synthase activity |
| BjuSUS06 | BjuB037515 | MW370529 | GO:0001666|response to hypoxia;GO:0010431|seed maturation;GO:0005982|starch metabolic process;GO:0005985|sucrose metabolic process | GO:0005829|cytosol;GO:0016020|membrane;GO:0009505|plant-type cell wall;GO:0042170|plastid membrane | GO:0016157|sucrose synthase activity |
| BjuSUS07 | BjuA036504 | MW370530 | GO:0010555|response to mannitol;GO:0009414|response to water deprivation;GO:0010431|seed maturation;GO:0005982|starch metabolic process;GO:0005985|sucrose metabolic process | N/A | GO:0016157|sucrose synthase activity |
| BjuSUS08 | BjuO006586 | MW370531 | GO:0010555|response to mannitol;GO:0009414|response to water deprivation;GO:0010431|seed maturation;GO:0005982|starch metabolic process;GO:0005985|sucrose metabolic process | N/A | GO:0016157|sucrose synthase activity |
| BjuSUS09 | BjuA018844 | MW370532 | GO:0080165|callose deposition in phloem sieve plate;GO:0005985|sucrose metabolic process | GO:0005618|cell wall;GO:0005576|extracellular regio | GO:0016157|sucrose synthase activity |
| BjuSUS10 | BjuB022852 | MW370533 | GO:0080165|callose deposition in phloem sieve plate;GO:0005985|sucrose metabolic process | GO:0005618|cell wall;GO:0005576|extracellular regio | GO:0016157|sucrose synthase activity |
| BjuSUS11 | BjuA043452 | MW370534 | GO:0080165|callose deposition in phloem sieve plate;GO:0005985|sucrose metabolic process | GO:0005618|cell wall;GO:0005576|extracellular regio | GO:0016157|sucrose synthase activity |
| BjuSUS12 | BjuB030220 | MW370535 | GO:0080165|callose deposition in phloem sieve plate;GO:0005985|sucrose metabolic process | GO:0005618|cell wall;GO:0005576|extracellular regio | GO:0016157|sucrose synthase activity |
| BjuSUS13 | BjuB030962 | MW370536 | GO:0080165|callose deposition in phloem sieve plate;GO:0005985|sucrose metabolic process | GO:0005618|cell wall;GO:0005576|extracellular regio | GO:0016157|sucrose synthase activity |
| BjuSUS14 | BjuB047347 | MW370537 | GO:0080165|callose deposition in phloem sieve plate;GO:0005985|sucrose metabolic process | GO:0005618|cell wall;GO:0005576|extracellular regio | GO:0016157|sucrose synthase activity |