**S4 Table. ISE6 proteins putatively associated with glutaminolysis.**

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| --- | --- | --- | --- | --- |
| **Protein**  **(VB accession name)** | **KEGG ortholog** | **Putative functions**  **(GO predictions)** | **Orthology to glutaminolytic enzyme** | **Change in expression** |
| (ISCW011739) prostate-specific transglutaminase, putative | NP\* | * peptide cross-linking * protein-glutamine gamma-glutamyltransferase activity * transferase activity, transferring acyl groups * transferase activity | Glutaminase  (Glase) | Increased expression with LGTV |
| (ISCW000393) glutamate dehydrogenase, putative | K00261  glutamate  dehydrogenase (NAD(P)+) | * cellular amino acid metabolic process * oxidation-reduction process * oxidoreductase activity, acting on the CH-NH2 group of donors, NAD or NADP as acceptor * oxidoreductase activity | Glutamate dehydrogenase  (GDH) | Increased expression with both LGTV and UV-LGTV |
| (ISCW015982) aldehyde dehydrogenase, putative | K00294  1-pyrroline-5-carboxylate dehydrogenase | * proline biosynthetic process * oxidation-reduction process * metabolic process * oxidoreductase activity, acting on the aldehyde or oxo group of donors, NAD or NADP as acceptor * 1-pyrroline-5-carboxylate dehydrogenase activity * oxidoreductase activity | GDH | Increased expression with both LGTV and UV-LGTV |
| (ISCW001521) membrane protein,  putative | NP | * oxidation-reduction process * saccharopine dehydrogenase (NAD+, L-glutamate-forming) activity * oxidoreductase activity | GDH | Increased expression with both LGTV and UV-LGTV |
| (ISCW020361) glutamine synthetase 1, putative | NP | * nitrogen compound metabolic process * glutamine biosynthetic process * ligase activity * glutamate-ammonia ligase activity |  | Decreased expression with both LGTV and UV-LGTV |

**\***NP denotes does not have a KEGG Ortholog.