|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Gene, exon and control | Splicing inclusion in prostate | Protein Function | Function of splice | References |
| *ADAM15*  exon 20  ESRP2 activates inclusion | More splicing inclusion in tumour (poorer prognosis isoform) | transmembrane glycoprotein involved in cell adhesion. Over-expressed in prostate cancer, and downregulation promotes metastasis in prostate cancer models. | *ADAM15* exon 20 coding information may affect interactions with SH3 domain proteins | ([Burdelski et al., 2017](#_ENREF_11); [Kleino et al., 2009](#_ENREF_40); [Kuefer et al., 2006](#_ENREF_43); [Najy et al., 2008](#_ENREF_63)) |
| *DOCK7*  exon 21  ESRP2 represses inclusion | More skipping in tumour (poorer prognosis isoform) | guanine nucleotide exchange factor for RAC1 and RAC3 Rho small GTPases |  | ([Murray et al., 2014](#_ENREF_61)) |
| *MINK1*  exon 18  ESRP2 activates  inclusion | More splicing inclusion in tumour (poorer prognosis isoform) | serine/threonine kinase |  |  |
| *MLPH*  ESRP2 represses exon 9 | Not differentially expressed in tumours, but exon 9 skipping reduced time to biochemical recurrence | Rab effector protein |  |  |
| *MYH10* ESRP2 represses exon 6 | Not differentially expressed in tumours, but exon 6 skipping reduced time to biochemical recurrence | Non-muscle actin dependent myosin |  |  |
| *MYO1B*  ESRP2 represses exon 23\* ( exon 23 activated by SRSF1) | Not differentially expressed in tumours, but exon 23 skipping reduced time to biochemical recurrence | Motor protein | Full length isoform is more oncogenic in gliomas, | ([Zhou et al., 2019](#_ENREF_103)) |
| NUMB  exon 6  ESRP2 activates inclusion | More skipping in tumour (better prognosis isoform – ESRP2 activates the poorer prognosis isoform) | Tumour suppressor that inhibits notch signalling and binds to MDM2 | *NUMB* exon 3 peptide coding information inhibits MDM2 interaction and prevents p53 degradation | ([Colaluca, Basile, Freiburger, D'Uva, Disalvatore, Vecchi, Confalonieri, Tosoni, Cecatiello, Malabarba, Yang, Kainosho, Sattler, Mapelli, Pece, & Di Fiore, 2018](#_ENREF_17)) |
| RPS24, ESRP2 represses exon 5 | More skipping in tumour (poorer prognosis isoform) | *RPS24* gene needed for cell proliferation, encodes ribosomal protein | Introduces translational stop so may induce mRNA instability | ([Y. Wang, Sui, Li, Cao, He, Yang, Zhu, Sun, & Pu, 2015](#_ENREF_95)) |
| *TUFT1*  ESRP2 activates exon 2 inclusion | Not differentially expressed in tumours, but exon 2 splicing reduced time to biochemical recurrence | Involved with adaptation to hypoxia, mesenchymal stem cell function, and neurotrophin nerve growth factor mediated neuronal differentiation |  |  |

Figure 5 – Source Data 1