

Supplementary Table S1: Gene and pathway enrichment analysis of the sixty hub genes

Term ID	Term description	Number of genes	P <sub>adj</sub>
<b>Molecular function</b>			
GO:0004842	Ubiquitin-protein transferase activity	20	3.78 x 10 <sup>-16</sup>
GO:0019787	Ubiquitin-like protein transferase activity	20	1.08 x 10 <sup>-15</sup>
GO:0003723	RNA binding	28	8.38 x 10 <sup>-11</sup>
GO:0061630	Ubiquitin protein ligase activity	11	5.08 x 10 <sup>-07</sup>
GO:0061659	Ubiquitin-like protein ligase activity	11	7.77 x 10 <sup>-07</sup>
GO:0140096	Catalytic activity, acting on a protein	24	3.76 x 10 <sup>-06</sup>
<b>Biological process</b>			
GO:0000377	RNA splicing, via transesterification reactions	32	1.55 x 10 <sup>-35</sup>
GO:0000398	mRNA splicing, via spliceosome	32	1.55 x 10 <sup>-35</sup>
GO:0000375	RNA splicing, via transesterification reactions	32	2.06 x 10 <sup>-35</sup>
GO:0008380	RNA splicing	32	6.21 x 10 <sup>-33</sup>
GO:0006397	mRNA processing	32	4.88 x 10 <sup>-32</sup>
GO:0016071	mRNA metabolic process	32	4.21 x 10 <sup>-24</sup>
<b>Cellular component</b>			
GO:0005681	Spliceosomal complex	18	4.14 x 10 <sup>-20</sup>
GO:0071013	Catalytic step 2 spliceosome	14	4.32 x 10 <sup>-18</sup>
GO:0005684	U2-type spliceosomal complex	14	1.41 x 10 <sup>-17</sup>
GO:1902494	Catalytic complex	29	2.24 x 10 <sup>-15</sup>
GO:0097525	Spliceosomal snRNP complex	11	1.66 x 10 <sup>-14</sup>
GO:0030532	Small nuclear ribonucleoprotein complex	11	8.91 x 10 <sup>-14</sup>
<b>KEGG Pathway</b>			
KEGG:03040	Spliceosome	20	1.44 x 10 <sup>-23</sup>
KEGG:03015	mRNA surveillance pathway	7	2.24 x 10 <sup>-05</sup>
KEGG:04120	Ubiquitin mediated proteolysis	5	0.033