

**Table S2. Ubiquitin-proteasome genes identified by in vivo transcription profiling.**

| ID <sup>a</sup> | Gene Name    | Annotation              |
|-----------------|--------------|-------------------------|
| CNA02100        | <i>RPN11</i> | DUBs, JAMM family       |
| CNA03330        | <i>UBI1</i>  | Ubiquitin precursor     |
| CNA07360        | <i>DOA4</i>  | DUBs, USP family        |
| CNAG_05098      | <i>HUB1</i>  | UB-like molecule        |
| CNB03140        | <i>Hrt1</i>  | Rub1 ligation enzyme    |
| CNC01280        | <i>UBP10</i> | DUBs, USP family        |
| CNC02000        | <i>UBA3</i>  | Rub1 activating enzyme  |
| CNC04440        | <i>RUB1</i>  | UB-like molecule        |
| CND01140        | <i>UBA4</i>  | Urm1 activating enzyme  |
| CND01170        | <i>UCH</i>   | DUBs, UCH family        |
| CND05210        | <i>DCN1</i>  | Rub1 ligation enzyme    |
| CNH02890        | <i>UBP5</i>  | DUBs, USP family        |
| CNJ01020        | <i>UBC12</i> | Rub1 conjugation enzyme |
| CNK02620        | <i>UBI4</i>  | Ubiquitin precursor     |
| CNL05240        | <i>HUB1</i>  | UB-like molecule        |
| CNL05330        | <i>URM1</i>  | UB-like molecule        |

<sup>a</sup>Broad or NCBI Locus ID