

Table S6: Proteins involved in multiple diseases.

| protein name | Uniprot accession | #disease annotated | content of disease annotation |
|--|-------------------|--------------------|--|
| Cellular tumor antigen p53 | P04637 | 46 | Can(42),Car(1),Mus(1),Ner(1),Oth(1) |
| Cyclin-dependent kinase inhibitor 2A | P42771 | 27 | Can(26), End(1) |
| GTPase KRas | P01116 | 22 | Can(18), Mal(4) |
| Myc proto-oncogene protein | P01106 | 18 | Can(18) |
| HLA class II histocompatibility antigen, DRB1-3 chain | P01912 | 17 | Car(3), End(1), Imm(9), Ner(2), Ski(2) |
| Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN | P60484 | 14 | Can(11), Mal(3) |
| Collagen alpha-1(II) chain | P02458 | 13 | Mal(9), Mus(3), Ner(1) |
| HLA class II histocompatibility antigen, DQ beta 1 chain | P01920 | 13 | Car(2), Dig(1), End(1), Imm(6), Ner(1), Ski(2) |
| GTPase NRas | P01111 | 12 | Can(8), Car(1), Mal(2), Imm(1) |
| Fibroblast growth factor receptor 3 | P22607 | 12 | Can(2), Mal(10) |