**S7 Table. Two-sided Fisher’s exact tests performed to determine enrichment for functional mutations at homo-oligomerization site residues of cancer genes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Hypothesis Test** | **Contingency Table** | | | **P-value** | **Odds Ratio** |
| H0: Functional mutations are equally prevalent at homo-oligomerization sitesof tumor suppressorss.   H1: Functional mutations are over or underrepresented on the homo-oligomerization sites of tumor suppressors. |  | Functional Mutations | Other Mutations | 1.73E-08 | 3.68 |
| Residues involved in homo-oligomerization of  tumor suppressors | 37 | 47 |
| All Residues of  Other Genes | 20092 | 94063 |
| H0: Functional mutations are equally prevalent at homo-oligomerization sitesof oncogenes.   H1: Functional mutations are over or underrepresented on the homo-oligomerization sites of oncogenes. |  | Functional Mutations | Other Mutations | 3.01E-01 | 0.77 |
| Residues involved in homo-oligomerization of  oncogenes | 23 | 139 |
| All Residues of  Other Genes | 20092 | 94063 |
| H0: Functional mutations are equally prevalent at homo-oligomerization sitesof cancer genes.   H1: Functional mutations are over or underrepresented on the homo-oligomerization sites of cancer genes. |  | Functional Mutations | Other Mutations | 6.40E-07 | 0.21 |
| Residues involved in homo-oligomerization of  Tumor Suppressors | 37 | 47 |
| Residues involved in homo-oligomerization of  Oncogenes | 23 | 139 |