

S2 Table. Median fragment-native Backbone-RMSD values for the PeptiDock set complexes obtained using Rosetta fragment picker and the motif-based fragment generation approach (used in PeptiDock (24)).

| Complex | PDB ID | | Peptide sequence (defined by PeptiDock) | Fragment quality ^a | |
|---------|---------------|--|--|-------------------------------|--|
| | Free Receptor | | | Rosetta fragment picker | PeptiDock sequence – motif based fragment picker |
| 1D4T:A | 1D1ZA | | TIYAQV | 2.4 | 1.9^b |
| 1SSH:A | 1OOTA | | PAMPAR | 2.0 | 2.1 |
| 1MFG:A | 2H3LA | | LDVPV | 1.4 | 1.4 |
| 2H9M:A | 2H14A | | ARTKQ | 2.1 | 2.4 |
| 2FOJ:A | 2FAWA | | RAHSS | 1.6 | 2.0 |
| 2HPL:A | 2HPJA | | DDLYG | 1.7 | 2.2 |
| 1CZY:A | 1CA4A | | PQQATDD | 2.4 | 2.5 |
| 1JD5:A | 1JDA | | AIAYF | 1.4 | 1.5 |
| 2VJ0:A | 1B9KA_1 | | WVTFE | 1.1 | 2.1 |
| 2VJ0:A | 1B9KA_2 | | FEDNF | 2.0 | 2.5 |
| 2C3I:B | 2J2IB | | RRRHPS | 2.5 | 2.4 |
| 2CCH:B | 1H1RB | | KGRRL | 1.5 | 1.9 |
| 1EG4:A | 1EG3A | | RSPPPY | 1.6 | 1.8 |
| 1RXZ:A | 1RWZA | | QATLERWF | 2.9 | 2.8 |
| 1ER8:E | 4PAEA | | HLLVY | 1.8 | 2.0 |
| 1JWG:A | 1JWFA | | DEDLL | 2.1 | 1.6 |

^a Similarity between fragments and bound peptide conformation: Median backbone RMSD (Å)

^b In bold: significantly better fragments ($\Delta \geq 0.3$ Å)