**Table S3:** Salt bridges as calculated via RING4.0 for ALovD-1, DL6091 and DL0912 (modeled PDBs), YtvA (2MWG) and VVD (3RH8). To make comparable calculations, each PDB was modified, and only 120 residues from the LOV core were left, excluding A´α and most of the J α in all structures.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ALovD-1** |  |  |  |  |
| **NodeId1** | **NodeId2** | **Distance** | **Angle** | **Positive** |
| A:20:\_:ASPa,b | A:47:\_:ARG | 3.546 | 105.699 | A:47:\_:ARG |
| A:28:\_:ASPa,b | A:38:\_:LYS | 2.733 | 72.461 | A:38:\_:LYS |
| A:40:\_:GLUa,b | A:81:\_:LYS | 2.660 | 101.752 | A:81:\_:LYS |
| A:61:\_:GLUb | A:64:\_:LYS | 2.800 | 33.545 | A:64:\_:LYS |
| A:64:\_:LYSb | A:70:\_:GLU | 3.087 | 73.974 | A:64:\_:LYS |
| A:69:\_:GLUb | A:96:\_:ARG | 3.402 | 78.996 | A:96:\_:ARG |
| A:77:\_:ARGb | A:114:\_:GLU | 3.476 | 96.902 | A:77:\_:ARG |
| A:75:\_:GLUa | A:115:\_:ARG | 3.896 | 114.687 | A:118:\_:ARG |
| A:89:\_:ARGa,b | A:110:\_:GLU | 3.802 | 26.511 | A:89:\_:ARG |
| A:116:\_:LYSb | A:119:\_:GLU | 2.708 | 47.971 | A:116:\_:LYS |
| **YtvA** |  |  |  |  |
| A:85:\_:LYS | A:112:\_:GLU | 3.674 | 106.325 | A:85:\_:LYS |
| **VVD** |  |  |  |  |
| A:57:\_:ARG | A:144:\_:GLU | 3.720 | 128.846 | A:57:\_:ARG |
| A:77:\_:ASP | A:176:\_:ARG | 3.739 | 43.411 | A:176:\_:ARG |
| A:82:\_:ASP | A:109:\_:ARG | 3.701 | 114.064 | A:109:\_:ARG |
| A:102:\_:GLU | A:154:\_:LYS | 3.117 | 89.045 | A:154:\_:LYS |
| A:153:\_:LYS | A:184:\_:GLU | 3.297 | 99.762 | A:153:\_:LYS |
| **DL6091** |  |  |  |  |
| A:33:\_:ASP | A:60:\_:ARG | 3.491 | 115.648 | A:60:\_:ARG |
| A:41:\_:ASP | A:51:\_:ARG | 3.531 | 67.845 | A:51:\_:ARG |
| A:45:\_:GLU | A:93:\_:ARG | 3.668 | 77.374 | A:93:\_:ARG |
| A:53:\_:GLU | A:94:\_:LYS | 2.775 | 137.192 | A:94:\_:LYS |
| A:70:\_:GLU | A:73:\_:LYS | 3.061 | 28.548 | A:73:\_:LYS |
| A:73:\_:LYS | A:77:\_:GLU | 2.803 | 46.382 | A:73:\_:LYS |
| A:76:\_:ARG | A:80:\_:ASP | 3.498 | 61.206 | A:76:\_:ARG |
| A:82:\_:GLU | A:109:\_:ARG | 3.375 | 120.324 | A:109:\_:ARG |
| A:88:\_:GLU | A:129:\_:ARG | 3.384 | 69.874 | A:129:\_:ARG |
| A:90:\_:ARG | A:98:\_:GLU | 3.344 | 62.559 | A:90:\_:ARG |
| **DL0912** |  |  |  |  |
| A:41:\_:GLU | A:83:\_:ARG | 3.419 | 120.759 | A:83:\_:ARG |
| A:48:\_:ASP | A:58:\_:ARG | 3.470 | 75.557 | A:58:\_:ARG |
| A:60:\_:GLU | A:101:\_:LYS | 2.626 | 105.126 | A:101:\_:LYS |
| A:77:\_:GLU | A:81:\_:ARG | 3.503 | 39.886 | A:81:\_:ARG |
| A:95:\_:GLU | A:136:\_:LYS | 3.788 | 91.687 | A:136:\_:LYS |
| A:130:\_:GLU | A:136:\_:LYS | 3.719 | 103.949 | A:136:\_:LYS |