

Supplementary Materials

The supplementary material corresponds to the *in silico* studies.

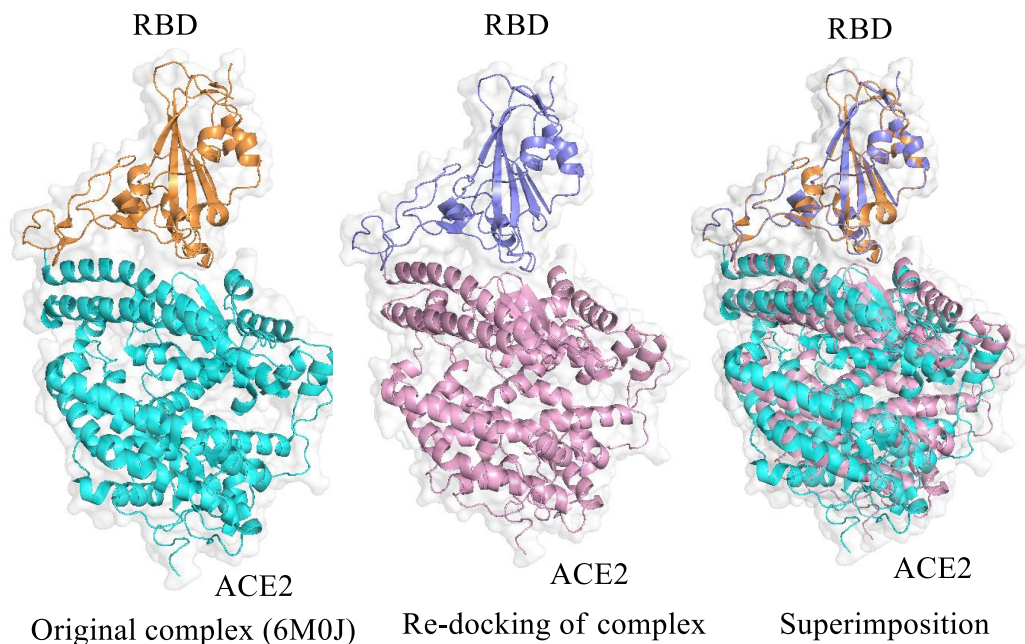


Figure S1. Comparison of protein-protein complex between RBD and ACE2 (re-docking versus original).

Table S3. List of top 20 ligands with best vina score recovered from Mol-Port.

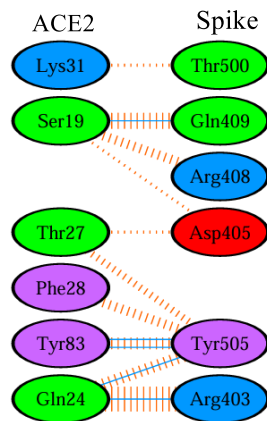
Number	Mol-Port ID	Internal code	Vina score (kcal/mol)	Availability	Amount/Price
1	MolPort-003-009-429	DRI-C24041_MP_SIM_50_U_19_out.pdbqt	-8.7	In stock	10 mg/99.00 USD
2	MolPort-000-656-930	DRI-C24041_MP_SIM_50_U_14_out.pdbqt	-8.4	In stock	10 mg/275.00 USD
3	MolPort-006-110-902	DRI-C24041_MP_SIM_50_U_25_out.pdbqt	-8	In stock	1 g/6.00 USD
4	MolPort-001-025-507	DRI-C24041_MP_SIM_50_U_88_out.pdbqt	-8	In stock	10 mg/134.01 USD
5	MolPort-019-334-419	DRI-C24041_MP_SIM_50_U_5_corregido_out.pdbqt	-7.9	In stock	1 g/10.00 USD
6	MolPort-002-826-402	DRI-C24041_MP_SIM_50_U_2_out.pdbqt	-7.8	In stock	10 mg/22.80 USD
7	MolPort-000-643-953	DRI-C24041_MP_SIM_50_U_69_out.pdbqt	-7.7	In stock	10 mg/399.00 USD
8	MolPort-000-643-952	DRI-C24041_MP_SIM_50_U_70_out.pdbqt	-7.6	In stock	5 mg/87.77 USD
9	MolPort-001-551-049	DRI-C24041_MP_SIM_50_U_73_out.pdbqt	-7.6	In stock	10 mg/399.00 USD
10	MolPort-044-193-346	DRI-C24041_MP_SIM_50_U_31_corregido_out.pdbqt	-7.5	In stock	5 mg/133.10 USD

11	MolPort-002-363-768	DRI-C24041_MP_SIM_50_U_80_out.pdbqt	-7.5	In stock	10 mg/22.80 USD
12	MolPort-003-134-901	DRI-C24041_MP_SIM_50_U_38_out.pdbqt	-7.3	In stock	10 mg/99.00 USD
13	MolPort-001-525-676	DRI-C24041_MP_SIM_50_U_47_out.pdbqt	-7.3	In stock	10 mg/22.80 USD
14	MolPort-028-745-491	DRI-C24041_MP_SIM_50_U_48_out.pdbqt	-7.3	Discontinued	-
15	MolPort-002-363-202	DRI-C24041_MP_SIM_50_U_65_out.pdbqt	-7.3	In stock	10 mg/22.80 USD
16	MolPort-002-840-110	DRI-C24041_MP_SIM_50_U_75_out.pdbqt	-7.3	In stock	10 mg/61.25 USD
17	MolPort-001-024-768	DRI-C24041_MP_SIM_50_U_10_out.pdbqt	-7.2	In stock	10 mg/61.25 USD
18	MolPort-000-652-164	DRI-C24041_MP_SIM_50_U_40_out.pdbqt	-7.2	In stock	10 mg/99.00 USD
19	MolPort-003-821-153	DRI-C24041_MP_SIM_50_U_8_out.pdbqt	-7.2	In stock	10 mg/22.80 USD
20	MolPort-002-827-725	DRI-C24041_MP_SIM_50_U_34_out.pdbqt	-7.1	In stock	10 mg/22.80 USD

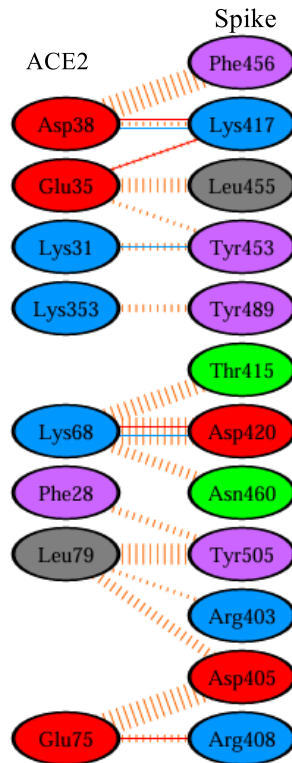
Table S4. List of top 20 ligands with best vina score recovered from PubChem.

Number	PubChem ID	Internal code	Vina score (kcal/mol)	Availability	Amount/Price
1	16678941	DRI-C24041_PC_SIM50_380_out.pdbqt	-8.9	In stock	10 mg/379.50 USD
2	8532	DRI-C24041_PC_SIM50_486_out.pdbqt	-8.4	In stock	10 mg/399.00 USD
3	9829523	DRI-C24041_PC_SIM50_201_out.pdbqt	-8.3	In stock	10 mg/568.00 USD
4	60838	DRI-C24041_PC_SIM50_79_out.pdbqt	-8.3	In stock	25 mg/80.00 USD
5	54680676	DRI-C24041_PC_SIM50_4_out.pdbqt	-8	In stock	50 mg/562.00 USD
6	54676884	DRI-C24041_PC_SIM50_179_out.pdbqt	-7.9	In stock	25 mg/134.70 USD
7	34231	DRI-C24041_PC_SIM50_271_out.pdbqt	-7.8	In stock	250 mg/12.82.00 USD
8	110635	DRI-C24041_PC_SIM50_231_out.pdbqt	-7.7	In stock	50 mg/266.00 USD
9	54698175	DRI-C24041_PC_SIM50_367_out.pdbqt	-7.7	not available for purchase	-
10	45138674	DRI-C24041_PC_SIM50_374_out.pdbqt	-7.7	In stock	1 mg/104.50 USD
11	62330	DRI-C24041_PC_SIM50_433_out.pdbqt	-7.7	In stock	10 mg/399.00 USD
12	31416	DRI-C24041_PC_SIM50_452_out.pdbqt	-7.7	In stock	1 mg/80.45 USD
13	135449332	DRI-C24041_PC_SIM50_173_out.pdbqt	-7.6	In stock	10 mg/167.20 USD
14	6918296	DRI-C24041_PC_SIM50_203_out.pdbqt	-7.6	In stock	10 mg/185.90 USD
15	5488548	DRI-C24041_PC_SIM50_205_out.pdbqt	-7.6	In stock	10 mg/298.00 USD
16	444031	DRI-C24041_PC_SIM50_410_out.pdbqt	-7.6	In stock	100 mg/300.00 USD
17	6918554	DRI-C24041_PC_SIM50_202_out.pdbqt	-7.5	In stock	10 mg/30.00 USD
18	3002335	DRI-C24041_PC_SIM50_217_out.pdbqt	-7.5	In stock	1 g/332.00 USD
19	20804	DRI-C24041_PC_SIM50_280_out.pdbqt	-7.5	In stock	5 g/30.00 USD
20	5717	DRI-C24041_PC_SIM50_314_out.pdbqt	-7.5	In stock	10 mg/76.00 USD
21	163233165	DRI-C24041_Control_out.pdbqt	-7.5	-	-

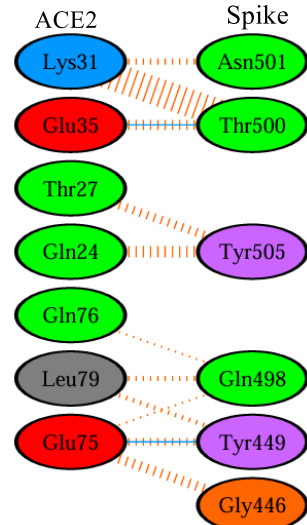
PPI in presence of **DRI-1**



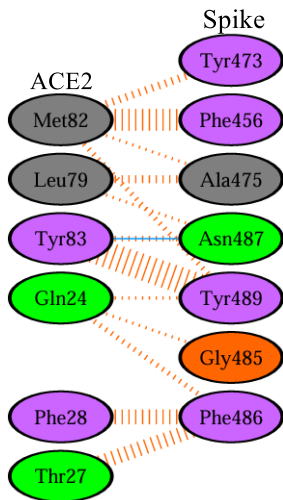
PPI in presence of **DRI-2**



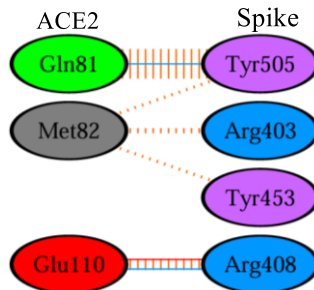
PPI in presence of **DRI-3**



PPI in presence of **DRI-4**



PPI in presence of **DRI-5**



PPI in presence of **DRI**

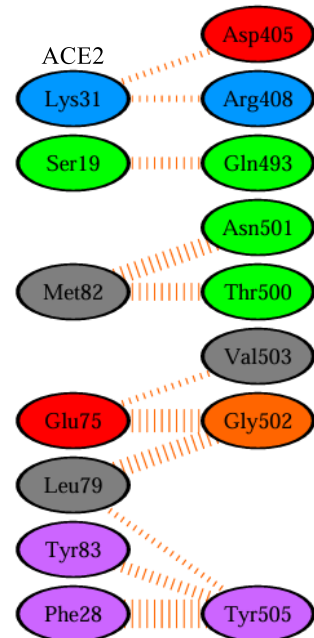


Figure S2. Interaction between RBD and ACE2 in presence of potential protein-protein inhibitors (PPI). Salt bridges are shown as red lines, yellow lines represent disulfide bonds, Hydrogen bonds are illustrated as sky-blue color and orange lines mean non-bonded contacts. Residue colours: Positive (His, Lys, and Arg); negative (Asp, Glu); Ser, Thr, Asn, Gln = neutral; Ala, Val, Leu, Ile, Met = aliphatic; Phe, Tyr, Trp = aromatic; P, G = Pro, Gly; C = cysteine.

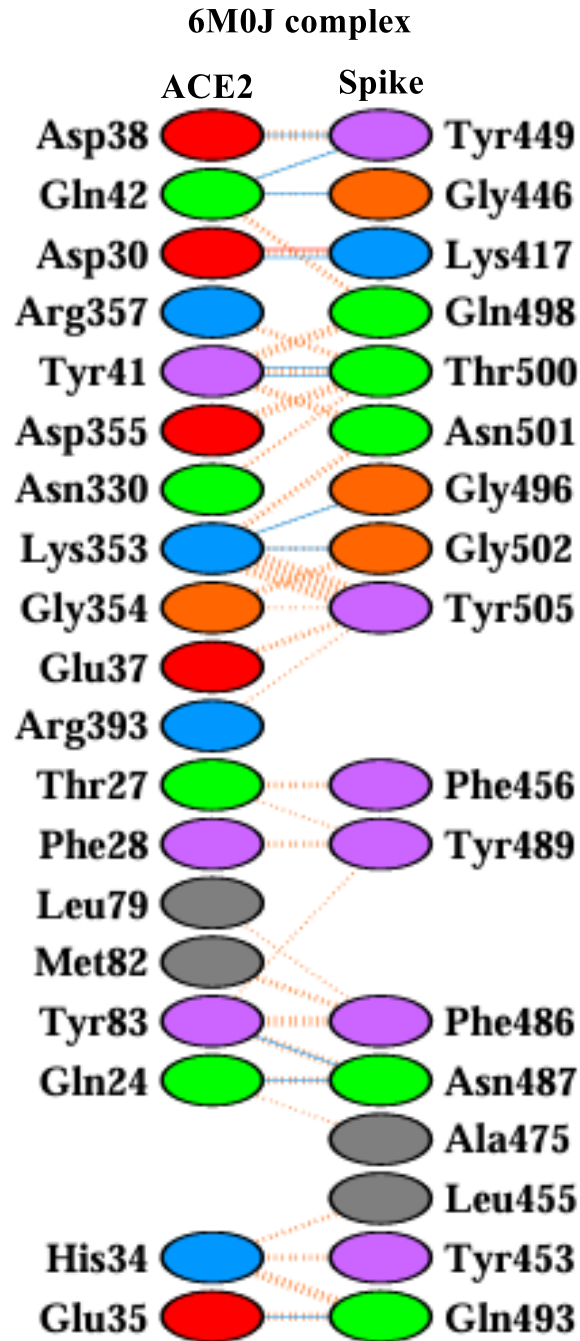


Figure S3. Protein-protein interaction profile of the original crystal (PDB ID: 6M0J). Salt bridges are shown as red lines, yellow lines represent disulfide bonds, Hydrogen bonds are illustrated as sky-blue color and orange lines mean non-bonded contacts. Residue colours:

Positive (His, Lys, and Arg); negative (Asp, Glu); Ser, Thr, Asn, Gln = neutral; Ala, Val, Leu, Ile, Met = aliphatic; Phe, Tyr, Trp = aromatic; P, G = Pro, Gly; C = cysteine.