



**Fig. S1** Comparisons between different crystallographic structures (shown in gray) and re-docking data (shown in yellow). Relevant details are presented in Table 6.

**Table S1.** RMSD and re-docking scores for different ligand–protein complexes

PDB ID	4EJN	2VUK	1RHJ	4MAN	6NJS	1ALU	5I9b	4JSV	6X83	1D5R
Target	AKT1	TP53	CASP3	BCL2	STAT3	IL6	HIF1A	mTOR	TNF	PTEN
Ligand	N-(4- {5-[3- (acetyl amino) phenyl ]-2-(2- amino pyridin -3-yl)- 3H- imidaz ol[4,5- b]pyrid in-3- yl}ben zyl)-3- fluorob	1-(9- ethyl- 9H- carbaz ol-3- yl)-N- methyl methan amine	3-(2-{5- TERT- BUTYL -3-[(4- METH YL- FURAZ AN-3- YLME THYL)- AMINO ]-2- OXO- 2H- PYRAZ IN-1- YL}-	4-[4- ({4'- chloro- 3-[2- (dimet hylami no)eth oxy]bi phenyl -2- yl}met hyl)pip erazin- 1-yl]- 2-(1H- indol- 5-	[(2- {[(5S,8 S,10aR) -3- acetyl- 8- ({(2S)- 5- amino- 1- [(diphen yl)methy l)amino ]-1,5- dioxope ntan-2- yl}carb	L(+)- TART ARIC ACID	2- OXOG LUTA RIC ACID	ADEN OSINE -5'- DIPH OSPH ATE	1- benzy l-1H- benzi midaz ole	L(+)- TART ARIC ACID

	enzami de		BUTYR YLAMI NO)-5- (HEXY L- METH YL- AMINO )-4- OXO- PENTA NOIC ACID ANION	yl oxy)- N-({3- nitro- 4- [(tetrah ydro- 2H- pyran- 4- ylmeth yl)ami no]phe nyl}sul fonyl)b enzami de	amoyl)- 6- oxodeca hydropy rrolo[1, 2- a][1,5]d iazocin- 5- yl]carba moyl}- 1H- indol-5- yl)(diflu oro)met hyl]pho sphonic acid (non- preferre d name)					
<b>RMSD value(A° )</b>	1.12	0.64	0.76	0.91	1.26	0.43	0.66	0.89	0.87	0.72
<b>s-score<sup>a</sup> (kcal/mol )</b>	-7.74	-9.45	-9.77	-8.23	-7.96	-10.54	-9.31	-8.98	-9.05	-10.11
<b>Ki<sup>b</sup> (μM)</b>	2.10	0.117	0.068	0.92	1.45	0.019	0.138	0.25	0.19	0.041

<sup>a</sup> S-score: binding free energy

<sup>b</sup>  $K_i = e^{\Delta G/RT}$ ,  $R = 1.986$  cal/mol K,  $T = 298$  K