

**Supplementary Table 1. In Vitro Characteristics of Selected Chemicals with Docking Score Order 1–50**

Lab No.*	Docking score	ChemBridge ID	MW	Relative inhibition <sup>†</sup>	Dil-LDL uptake <sup>‡</sup>	Amount of the LDLR <sup>§</sup>	Amount of PCSK9 <sup>§</sup>
CBC_1	28.40	5323858	348.5	36.8%	1.55	1.72	0.97
CBC_2	27.26	5422509	419.5	49.7%	1.97	1.58	0.97
CBC_3	27.12	5423970	389.5	43.9%	1.85	1.42	0.53
CBC_4	28.18	5428460	400.5	31.7%	1.35	0.93	0.60
CBC_5	27.15	5573554	276.3	10.7%	1.08	1.03	0.29
CBC_6	27.20	5646807	393.5	17.2%	0.85	0.91	0.68
CBC_7	27.00	5679233	405.5	12.6%	1.11	0.77	0.75
CBC_8	28.45	5781565	415	37.3%	1.49	1.40	1.07
CBC_9	28.82	5834186	445.5	12.9%	0.90	0.84	0.57
CBC_10	27.78	5851930	404.5	9.9%	0.85	0.93	0.76
CBC_11	27.27	5862390	397.3	4.5%	0.94	0.81	0.49
CBC_12	28.36	5865258	430.2	-2.0%	1.08	0.74	0.68
CBC_13	28.17	6577494	455.6	41.4%	1.66	1.77	1.54
CBC_14	27.13	6578587	442.6	46.6%	2.26	1.20	1.90
CBC_15	27.10	6579857	379.5	22.9%	1.41	1.44	1.07
CBC_16	27.37	7000500	388.5	14.1%	1.01	0.26	0.01
CBC_17	28.26	7011653	327.5	45.0%	1.56	0.92	1.11
CBC_18	27.90	7017850	299.4	49.9%	1.56	0.69	0.98
CBC_19	27.50	7021996	341.5	38.3%	1.59	1.37	1.20
CBC_20	29.19	7300311	380.5	-1.6%	1.05	0.87	0.86
CBC_21	28.47	7319736	355.9	47.5%	1.36	1.09	0.72
CBC_22	27.42	7497360	449.6	11.6%	0.97	1.19	1.23
CBC_23	27.95	7596514	463.6	11.7%	0.87	1.15	0.99
CBC_24	27.52	7597336	422.6	12.9%	0.80	0.80	0.75
CBC_25	27.75	7682179	484	12.1%	1.06	1.18	0.66
CBC_26	27.48	7732594	385.4	53.4%	0.94	0.56	0.59
CBC_27	27.31	7736937	376.4	14.4%	0.95	0.88	0.86
CBC_28	28.26	7796312	416.5	-4.5%	0.90	0.79	0.98
CBC_29	27.12	7877851	416.5	3.3%	0.76	1.32	0.74
CBC_30	27.83	7883245	408.3	20.2%	0.95	1.10	1.34
CBC_31	27.05	7891362	354.4	13.0%	0.87	0.87	0.91
CBC_32	27.04	7922733	385.8	19.0%	0.81	0.64	0.20
CBC_33	28.85	7925242	341.5	52.7%	1.85	1.86	1.80
CBC_34	27.05	7925467	382.4	-2.5%	0.73	0.87	0.52
CBC_35	27.18	7926470	386.9	-12.0%	0.99	0.87	0.10
CBC_36	29.63	7926604	371.5	49.3%	1.69	1.57	1.22
CBC_37	27.06	7941561	416.6	11.3%	0.99	0.29	0.29
CBC_38	28.99	7949973	437.5	-3.2%	0.95	1.37	0.40
CBC_39	27.87	7962923	432.9	10.0%	1.05	0.81	1.01
CBC_40	29.17	7966968	383.5	39.9%	1.57	1.08	1.00
CBC_41	27.18	7968349	372.5	12.6%	1.09	0.76	0.55
CBC_42	28.00	7969162	453.5	33.6%	1.07	0.93	0.81
CBC_43	27.40	7983219	430.9	31.4%	1.49	1.04	0.80
CBC_44	27.58	7984456	405.9	18.2%	1.46	1.43	1.15
CBC_45	28.76	7990813	440.5	-6.5%	1.08	0.83	0.98
CBC_46	27.70	7998682	384.4	30.9%	1.15	0.92	0.76
CBC_47	27.38	9024196	384.5	22.9%	1.31	0.99	0.68
CBC_48	27.11	9025824	346.5	25.0%	1.09	1.08	0.67
CBC_49	27.63	9070071	371.5	30.5%	1.39	1.43	1.64
CBC_50	27.47	9148410	415.5	38.7%	1.39	1.17	1.15

MW, molecular weight; LDL, low density lipoprotein; LDLR, LDL receptor; PCSK9, proprotein convertase subtilisin/kexin type 9.

\*Lab No. is arbitrarily denoted according to the order of the ChemBridge ID number, <sup>†</sup>Relative inhibition represents the difference in percentile between the intensity of PCSK9-LDLR in the presence of the chemical and that in the presence of the vehicle (DMSO), which was set as 100%, <sup>‡</sup>Dil-LDL uptake denotes the factor of the mean fluorescence intensity in HepG2 cells treated with each chemical compared to that in cells treated with the vehicle, <sup>§</sup>The amount of LDLR or PCSK9 denotes the factor of the signal for LDLR or PCSK9, respectively, from immunoblot data analyzed by ImageJ.