



Legends for Supplemenatry Figure S1

Sensor-gram of GST-PAH1 with (a) or without (b) capturing bitinylated REST bound with SA chip. (c) and (d) indicates enlarged sensor-grams of (a) and (b), respectively. Red indicates injection of each analyte. Green indicates injection of vehicle (DMSO).

(e) The results of TR-FRET at 665 and 620 nm using various concentration of GST-PAH1or PAH1-FLAG with various concentration of biotinylated REST in the presence of anti-GST-Eu3+ (left) or anti-FLAG-Eu3+ (right) with SA-XL665. The data are expressed as means ± SEM (n= 4).

## Supplementary table S1

REST	PAH1	S/B	S/N	Z'-factor	CV	Number of sample
	GST-10 nM	26.6	469.9	0.91	2.8%	n=4
1000 nM	GST-100 nM	27.0	478.7	0.94	1.7%	n=4
	GST-1000 nM	29.2	517.8	0.96	1.2%	n=4
	GST-10,000 nM	7.7	123.9	0.86	3.3%	n=4
10,000 nM	GST-10 nM	24.2	1,114.3	0.95	1.6%	n=4
	GST-100 nM	26.7	1230.7	0.94	1.8%	n=4
	GST-1000 nM	31.1	1441.0	0.86	4.4%	n=4
	GST-10,000 nM	11.7	515.1	0.87	3.7%	n=4
	FLAG-10,000 nM	6.9	165.3	0.83	4.3%	n=4

## Qualities of independent experiments