a

Norepinephrine	K_{on} ($M^{-1}min^{-1}$)	n	K_{off} (min^{-1})	n	K_{off}/K_{on} (nM)	n
β_1AR	$2.0 \pm 0.15 \times 10^5$	7	$6.4 \pm 1.2 \times 10^{-2}$	7	$3.1 \pm 0.5 \times 10^2$	7
β_2AR	$8.5 \pm 1.5 \times 10^3$	4	$4.1 \pm 1.2 \times 10^{-2}$	4	$4.7 \pm 0.6 \times 10^3$	4
$\beta_1AR_{in}/\beta_2AR_{out}$	$6.7 \pm 0.8 \times 10^3$	3	$1.0 \pm 0.1 \times 10^{-1}$	3	$1.4 \pm 0.2 \times 10^4$	3
$\beta_2AR_{in}/\beta_1AR_{out}$	$4.9 \pm 1.3 \times 10^5$	8	$9.4 \pm 2.1 \times 10^{-2}$	8	$2.5 \pm 0.5 \times 10^2$	8
β_1AR_6mut	$3.0 \pm 0.8 \times 10^4$	3	$2.4 \pm 0.6 \times 10^{-2}$	3	$8.1 \pm 0.3 \times 10^2$	3
β_2AR_6mut	$1.4 \pm 0.3 \times 10^5$	4	$6.1 \pm 1.4 \times 10^{-2}$	4	$4.6 \pm 0.7 \times 10^2$	4

b

Epinephrine	K_{on} ($M^{-1}min^{-1}$)	n	K_{off} (min^{-1})	n	K_{off}/K_{on} (nM)	n
β_1AR	$6.2 \pm 0.6 \times 10^4$	5	$5.1 \pm 0.9 \times 10^{-2}$	5	$8.2 \pm 1 \times 10^2$	5
β_2AR	$1.2 \pm 0.2 \times 10^5$	7	$4.7 \pm 1.1 \times 10^{-2}$	7	$3.8 \pm 0.6 \times 10^2$	7
$\beta_1AR_{in}/\beta_2AR_{out}$	$6.3 \pm 1.1 \times 10^4$	4	$2.5 \pm 0.4 \times 10^{-1}$	4	$4.1 \pm 0.5 \times 10^3$	4
$\beta_2AR_{in}/\beta_1AR_{out}$	$1.3 \pm 0.3 \times 10^5$	4	$3.8 \pm 1.2 \times 10^{-2}$	4	$2.8 \pm 0.5 \times 10^2$	4

Supplementary information, Table. S1| The binding kinetics of catecholamines to the β_1AR, the β_2AR, the chimeric $\beta_1AR_{in}/\beta_1AR_{out}$, $\beta_1AR_{in}/\beta_1AR_{out}$ receptors and the β_1AR_6mut, β_2AR_6mut mutants.

a. The association rate, dissociation rate and K_d values of norepinephrine to the β_1AR, the β_2AR, the chimeric $\beta_1AR_{in}/\beta_1AR_{out}$, $\beta_1AR_{in}/\beta_1AR_{out}$ receptors and the β_1AR_6mut, β_2AR_6mut mutants. b. The association rate, dissociation rate and K_d values of epinephrine to the β_1AR, the β_2AR and the chimeric $\beta_1AR_{in}/\beta_1AR_{out}$, $\beta_1AR_{in}/\beta_1AR_{out}$ receptors.