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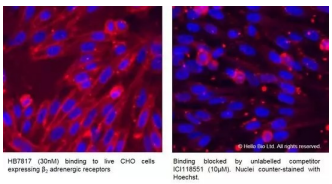
DATASHEET

CA200689 CellAura fluorescent β_2 antagonist [(S)-propranolol-red]

Product overview

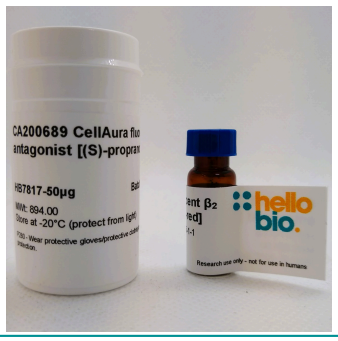
Name	CA200689 CellAura fluorescent β_2 antagonist [(S)-propranolol-red]
Cat No	HB7817
Biological description	Competitive fluorescent β_2-adrenoceptor antagonist. Displays selectivity for β_2 over β_1 and β_3 (apparent K_D values are 9.21, 7.76 and 7.09 respectively). Antagonizes the activity of isoprenaline, a non-selective β-adrenoceptor agonist. Exhibits no intrinsic agonist activity.
Alternative names	CA200689|;β_2-633-AN2
Biological action	Antagonist
Purity	>95%
Description	Competitive fluorescent β_2-adrenoceptor antagonist

Images



HB7817 (30nM) binding to live CHO cells expressing β_2 adrenergic receptors

Binding blocked by unlabelled competitor ICI118551 (10μM). Nuclei counter-stained with Hoechst.



Biological Data

Application notes	For imaging at β_1 / β_2 / β_3 adrenoceptors use solutions up to 100 nM.
Pharmacological validation	The CellAura fluorescent β2 antagonist [(S)-propranolol-red] ligand was shown to antagonize the activity of the non-selective β agonist, isoprenaline, in three separate recombinant CHO cell lines expressing either the human β_1, β_2 or β_3 receptor and a cyclic AMP-responsive secreted placental alkaline phosphatase (SPAP) reporter gene. The cyclic AMP-induced expression of SPAP was measured under basal and forskolin-stimulated (maximal) conditions. Addition of CellAura fluorescent β2 antagonist [(S)-propranolol-red] to the basal or forskolin-stimulated cells did not significantly alter basal and stimulated SPAP levels, demonstrating that CellAura fluorescent β2 antagonist [(S)-propranolol-red] has no intrinsic agonist activity at either β_1, β_2 or β_3 receptors. To determine the apparent KD for CellAura fluorescent β2 antagonist [(S)-propranolol-red] at β_1, β_2 and β_3 receptors, cells were treated with varying concentrations of isoprenaline alone, or in the presence of 1µM CellAura fluorescent β2 antagonist [(S)-propranolol-red], and the cyclic AMP-induced expression of SPAP measured. The apparent KD was calculated from the rightward shift of the agonist response curve in the presence of CellAura fluorescent β2 antagonist [(S)-propranolol-red], compared to the response curve for the agonist alone, for β_1, β_2 and β_3 receptor expressing cell lines.

Solubility & Handling

Storage instructions	-20°C (protect from light)
Solubility overview	Soluble in DMSO
Handling	After thawing individual aliquots for use, we recommend briefly sonicating the sample to ensure it is fully dissolved and the solution is homogeneous. We do not recommend using the product after

	subjecting it to repetitive freeze-thaw cycles.
Shipping conditions	The product, supplied in a dry form, is stable at ambient temperature for periods of up to a few days and does not require shipping on ice/dry ice.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Molecular Weight	894
Source	Synthetic
Formulation	Lyophilized film
Excitation	633 nm
Emission	650 nm