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# **DATASHEET**

CA200689 CellAura fluorescent β<sub>2</sub> antagonist [(S)-propranolol-red]

#### **Product overview**

Name CA200689 CellAura fluorescent β<sub>2</sub> antagonist [(S)-propranolol-red]

Cat No HB7817

Biological description Competitive fluorescent β<sub>2</sub>-adrenoceptor antagonist. Displays selectivity for β<sub>2</sub> over β<sub>1</sub> and β<sub>3</sub>

(apparent K<sub>D</sub> 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|; $\beta_2$ -633-AN2

**Biological action**Purity
Antagonist >95%

### **Images**









## **Biological Data**

Application notes
Pharmacological validation

For imaging at  $\beta_1/\beta_2/\beta_3$  adrenoceptors use solutions up to 100 nM.

The CellAura fluorescent  $\beta 2$  antagonist [(S)-propranolol-red] ligand was shown to antagonize the activity of the non-selective  $\beta$  agonist, isoprenaline, in three separate recombinant CHO cell lines expressing either the human  $\beta_1$ ,  $\beta_2$  or  $\beta_3$  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  $\beta 2$  antagonist [(S)-propranolol-red] to the basal or forskolin-stimulated cells did not significantly alter basal and stimulated SPAP levels, demonstrating that CellAura fluorescent  $\beta 2$  antagonist [(S)-propranolol-red] has no intrinsic agonist activity at either  $\beta_1$ ,  $\beta_2$  or  $\beta_3$  receptors. To determine the apparent KD for CellAura fluorescent  $\beta 2$  antagonist [(S)-propranolol-red] at  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  receptors, cells were treated with varying concentrations of isoprenaline alone, or in the presence of  $1 \mu M$  CellAura fluorescent  $\beta 2$  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  $\beta 2$  antagonist [(S)-propranolol-red], compared to the response curve for the agonist alone, for  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  receptor expressing cell lines.

# **Solubility & Handling**

Storage instructions Solubility overview Storage of solutions -20°C (protect from light) Soluble in DMSO

Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

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** 

Important

Stable for ambient temperature shipping. Follow storage instructions on receipt.

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 Weight894SourceSyntheticFormulationLyophilized filmExcitation633 nmEmission650 nm