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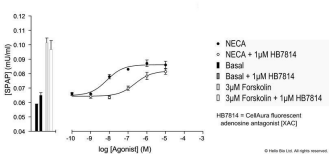
DATASHEET

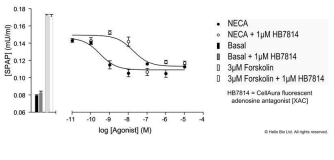
CA200634 CellAura fluorescent adenosine antagonist [XAC]

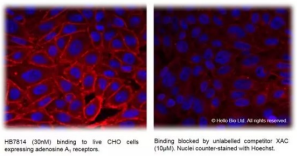
Product overview

Name	CA200634 CellAura fluorescent adenosine antagonist [XAC]
Cat No	HB7814
Biological description	Competitive fluorescent adenosine receptor antagonist (apparent K_D values are 7.50, 7.37 and 7.30 for A_{2A}, A_3 and A_1 respectively). Antagonizes the activity of NECA, an adenosine receptor agonist. Inhibits cAMP accumulation and stimulates inositol phosphate accumulation (pK_b values are 6.4 and 6.5 respectively). Exhibits no intrinsic agonist activity.
Alternative names	Fluorescent Adenosine receptor Antagonist (A-633-AN), A-633-AN, XAC-X-BY630
Biological action	Antagonist
Purity	>97%
Description	Competitive fluorescent adenosine receptor antagonist

Images







HB7814 (30nM) binding to live CHO cells expressing adenosine A_1 receptors.

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

Biological Data

Application notes	For ligand binding; fluorescence imaging; high content analysis; kinetic analysis; cell sorting at adenosine A_1 / A_{2A} / A_3 receptors use solutions up to 100 nM.
Pharmacological validation	The CellAura fluorescent adenosine antagonist [XAC] ligand was shown to antagonize the activity of the adenosine receptor agonist adenosine-5'-N-ethyluronamide (NECA), in three separate recombinant CHO cell lines expressing the human A_1, A_{2A} or A_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 adenosine antagonist [XAC] to the basal or forskolin-stimulated cells did not significantly alter basal and stimulated SPAP levels, demonstrating that CellAura fluorescent adenosine antagonist [XAC] has no intrinsic agonist activity.To determine the apparent KD for CellAura fluorescent adenosine antagonist [XAC], cells were treated with varying concentrations of NECA alone, or in the presence of 1µM CellAura fluorescent adenosine antagonist [XAC], and the cyclic AMP-induced expression of SPAP measured.The apparent KD at A_1, A_{2A} and A_3 receptors was calculated from the rightward shift of the agonist response curve in the presence of CellAura fluorescent adenosine antagonist [XAC], compared to the response curve for the agonist alone, for each receptor-expressing cell line.

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	974
Source	Synthetic
Appearance	Purple solid
Formulation	Lyophilized film
Excitation	636 nm
Emission	651 nm