

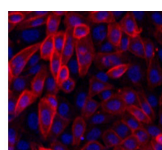
DATASHEET

CA200645 CellAura fluorescent adenosine A₃ antagonist [XAC]

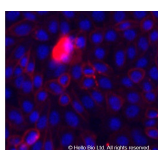
Product overview

Name	CA200645 CellAura fluorescent adenosine A ₃ antagonist [XAC]
Cat No	HB7812
Description	Fluorescent A ₃ adenosine receptor antagonist
Biological description	Fluorescent A ₃ adenosine receptor antagonist. Displays selectivity for A ₃ over A _{2A} and A ₁ (apparent K _D values are 8.10, 6.74 and 6.57 respectively). Antagonizes the activity of NECA, an adenosine receptor agonist. Exhibits no intrinsic agonist activity. A fluorescent Xanthine Amine Congener (XAC) analog.
Alternative names	Fluorescent Adenosine A3 receptor Antagonist (A3-633-AN), A ₃ -633-AN
Biological action	Antagonist
Purity	>97%

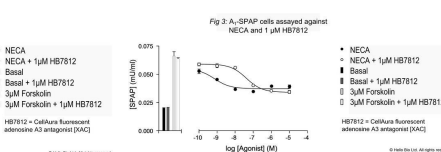
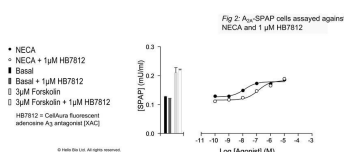
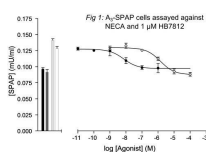
Images



HB7812 (100nM) binding to live CHO cells expressing adenosine A₃ receptors.



Binding blocked by unlabeled competitor XAC (10µM). Nuclei counter-stained with DAPI.



Biological Data

Application notes

For ligand binding; fluorescence imaging; high content analysis; kinetic analysis; cell sorting at adenosine A₁ / A_{2A} / A₃ receptors use solutions up to 100 nM.

Pharmacological validation

The CellAura fluorescent adenosine A₃ antagonist [XAC] ligand was shown to antagonize the activity of the adenosine receptor agonist, NECA, in three separate recombinant CHO cell lines expressing the human A₁, A_{2A} or A₃ 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 A₃ antagonist [XAC] to the basal or forskolin-stimulated cells did not significantly alter basal and stimulated SPAP levels, demonstrating that CellAura fluorescent adenosine A₃ antagonist [XAC] has no intrinsic agonist activity. To determine the apparent KD for CellAura fluorescent adenosine A₃ antagonist [XAC], cells were treated with varying concentrations of NECA alone, or in the presence of 1µM CellAura fluorescent adenosine A₃ antagonist [XAC], and the cyclic AMP-induced expression of SPAP measured. The apparent KD at A₁, A_{2A} and A₃ receptors was calculated from the rightward shift of the agonist response curve in the presence of CellAura fluorescent adenosine A₃ 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	1144
Source	Synthetic
Appearance	Purple solid
Formulation	Lyophilized film
Excitation	633 nm
Emission	650 nm
