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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

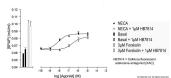
respectively). Exhibits no intrinsic agonist activity.

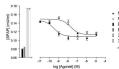
Alternative names Fluorescent Adenosine receptor Antagonist (A-633-AN), A-633-AN, XAC-X-BY630

Biological action Antagonist >97%

Description Competitive fluorescent adenosine receptor antagonist

Images











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

Storage of solutions 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.

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

Handling

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 Weight974SourceSyntheticAppearancePurple solidFormulationLyophilized filmExcitation636 nmEmission651 nm