Say **hello** to **affordable**, **trusted**, life science tools!

Agonists & antagonists
Enzyme inhibitors & activators
Antibodies
Peptides & proteins
Dyes & stains
Fluorescent tools

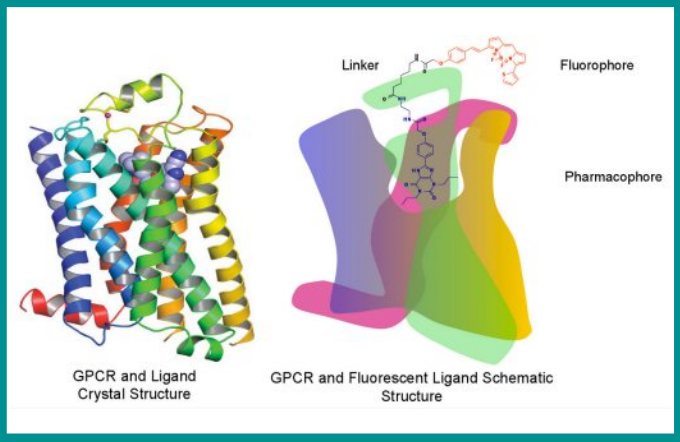
hello bio.

Introducing the CellAura FLUORESCENT LIGAND RANGE

CellAura fluorescent ligands are state-of-the-art fluorescent tools designed for use in life science research and drug discovery. We have combined molecular pharmacology and synthetic chemistry to provide you with high quality fluorescent ligands that are as informative as label-free kinetics, as safe as antibodies and as easy to use as radioligands.

CellAura fluorescent ligands target G protein coupled receptors (GPCRs) and are comprised of three units:

- a pharmacophore - e.g. a synthetic agonist or antagonist
- a fluorescent dye (the fluorophore)
- a linker - which connects the pharmacophore with the dye



A new alternative to radioligands

Visualization of the fluorescent tracer bound to a GPCR offers you several advantages compared to using conventional radioisotope-labelled ligands:

- Immediate ‘real time’ readout
- Visual confirmation of receptor localisation
- Multi-colour and multi-parameter data generation
- Miniaturisation capability (one cell per data point)
- No scintillation detection costs
- Enhanced safety with reduced costs - no radioisotope use and disposal

Introducing CellAura Applications

Applications

Each CellAura fluorescent ligand is characterised using live cell imaging and functional analysis to confirm its affinity and pharmacological activity. They have been used successfully in a wide range of applications including:

Fluorescent Ligand Binding

Increased safety, reduced disposal cost and environmental impact vs radioligand binding.

High Content Screening

Live cell imaging of receptor-ligand binding, displacement and receptor internalisation.

Fluorescence Correlation Spectroscopy (FCS)

Real-time analysis of single molecule ligand-receptor interactions.

Fluorescence Activated Cell Sorting (FACS)

No need to generate fluorescence-tagged antibodies – you can select receptor expressing cells using a direct receptor-binding ligand.

Dual Readout Binding and Function (eg Ca^{2+} signalling)

Distinguishes agonists, antagonists/inverse agonists, off-target effects and non-binders in one assay to eliminate false hits and reduce follow-on screening.

Confocal Microscopy

Localise receptor distribution in single cells, cell cultures and tissue sections.

High Throughput Screening

Dynamic or endpoint binding and displacement Fluorescence Intensity assays.

Receptor Dimerisation

FRET between two fluorophores using a common 'warhead' (homodimerisation) or two different 'warheads' (heterodimerisation).

Ligand Binding Kinetics

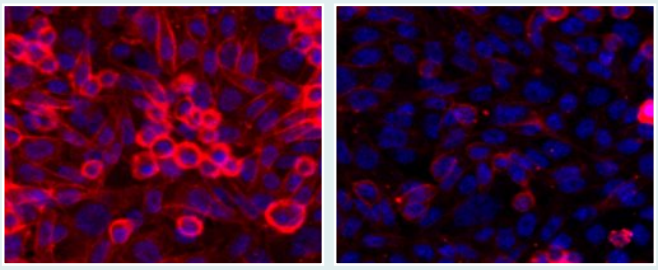
Real-time analysis of ligand association and dissociation rates to determine receptor affinity.

Allosteric Modulator studies

Kinetic measurements of allosteric modulator effects on ligand association and dissociation rate.

CellAura fluorescent ligands in action

CellAura fluorescent adenosine agonist [NECA] (HB7813) is a fluorescent adenosine receptor agonist, based on the non selective adenosine agonist NECA. It displays K_D values of 8.57, 8.47, 6.76 and 5.69 for A_3, A_1, A_{2A} and A_{2B} receptors respectively.



Left: *the HB7813 ligand (30nM) binding to live CHO cells expressing adenosine A_3 receptors.*

Right: *binding blocked by the unlabelled competing ligand XAC (10 μM). Nuclei have been counter-stained with Hoecsht.*

Cordeux et al (2008) Agonist-occupied A3 adenosine receptors exist within heterogeneous complexes in membrane microdomains of individual living cells. FASEB J. 22(3):850-60.

Middleton et al (2007) New fluorescent adenosine A1-receptor agonists that allow quantification of ligand-receptor interactions in microdomains of single living cells. J Med Chem. 50(4):782-93

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Introducing the **CellAura Range**

CAT NO.	PRODUCT NAME	PHARMACOPHORE	EXCITATION/ EMISSION	COLOUR	PACK SIZE
HB7812	**CellAura fluorescent adenosine A_3 antagonist [XAC]**	XAC-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent A_3 adenosine receptor antagonist (apparent K_D values are 8.10, 6.74 and 6.57 for A_3, A_{2A} and A_1 respectively). Antagonizes the activity of NECA, an adenosine receptor agonist. Exhibits no intrinsic agonist activity. A fluorescent Xanthine Amine Congener (XAC) analog.					
HB7813	**CellAura fluorescent adenosine agonist [NECA]**	NECA-derivative	*638/ 657 nm*	Red	*50µg*
Fluorescent adenosine receptor agonist (apparent K_D values are 8.57, 8.47, 6.76 and 5.69 for A_3, A_1, A_{2A} and A_{2B} respectively). Also inhibits forskolin-stimulated cAMP accumulation (pIC_{50} = 8.57) and [3H]-inositol phosphate accumulation (pEC_{50} = 7.34). A fluorescent adenosine receptor ligand derived from NECA, non-selective adenosine agonist.					
HB7814	**CellAura fluorescent adenosine antagonist [XAC]**	XAC-derivative	*636/ 651 nm*	Red	*50µg*
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.					
HB7816	**CellAura fluorescent β_2 antagonist [(S)-propranolol-green]**	(S)-Propranolol-derivative	*488/ 525 nm*	Green	*50µg*
Fluorescent β_2-adrenoceptor antagonist (apparent K_D values are 7.68, 6.42 and <4.0 for β_2, β_1 and β_3 respectively). Antagonizes the activity of isoprenaline, a non-selective β-adrenoceptor agonist. Exhibits no intrinsic agonist activity.					
HB7817	**CellAura fluorescent β_2 antagonist [(S)-propranolol-red]**	(S)-Propranolol-derivative	*633/ 650 nm*	Red	*50µg*
Competitive fluorescent β_2-adrenoceptor antagonist (apparent K_D values are 9.21, 7.76 and 7.09 for β_2, β_1 and β_3 respectively). Antagonizes the activity of isoprenaline, a non-selective β-adrenoceptor agonist. Exhibits no intrinsic agonist activity.					
HB7818	**CellAura fluorescent β_2 antagonist [(±)-alprenolol]**	(±)-Alprenolol-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent β_2-adrenoceptor antagonist (apparent K_D values are 8.91, 7.50 and 7.09 for β_2, β_1 and β_3 respectively). Antagonizes the activity of isoprenaline, a non-selective β-adrenoceptor agonist.					
HB7819	**CellAura fluorescent β_2 antagonist [(±)-pindolol]**	(±)-Pindolol-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent β_2-adrenoceptor antagonist (apparent K_D values are 7.96, 7.01 and 6.42 for β_2, β_1 and β_3 respectively). Antagonizes the activity of isoprenaline, a non-selective β-adrenoceptor agonist.					
HB7820	**CellAura fluorescent β_2 antagonist [(±)-propranolol]**	(±)-Pindolol-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent β_2-adrenoceptor antagonist (apparent K_D values are 8.87, 7.25 and 6.98 for β_2, β_1 and β_3 respectively). Antagonizes the activity of isoprenaline, a non-selective β-adrenoceptor agonist.					
HB7821	**CellAura fluorescent β_3 agonist [(S)-carazolol]**	(S)-Carazolol-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent β_3-adrenoceptor partial agonist. Exhibits little agonist activity at β_1 and none at β_2. Also acts as antagonist at β_1, β_2 and β_3 (apparent K_D values are 6.44, 8.76 and 7.24 respectively). Blocks the activity of isoprenaline, a non-selective β-adrenoceptor agonist.					
HB7822	**CellAura fluorescent D_1 antagonist [SKF83566-green]**	SKF83566-derivative	*488/ 525 nm*	Green	*50µg*
Selective BODIPY-FL-labelled fluorescent D_1 dopamine receptor antagonist (apparent K_D values are 7.09, < 5 and 7.56 for D_1, D_2 and D_5 receptors respectively). Also antagonizes the activity of SKF 83566, a D_1 dopamine receptor agonist. Displays no intrinsic agonist activity.					
HB7824	**CellAura fluorescent H_1 antagonist [mepyramine]**	Mepyramine-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent H_1 histamine receptor antagonist (apparent K_D values are 8.07, 5.37 and >6 for H_1, H_2 and H_3 receptors respectively). Also antagonizes the activity of Histamine, a H_1 histamine receptor agonist. Displays no intrinsic activity. A fluorescent mepyramine analogue.					
HB7825	**CellAura fluorescent H_2 antagonist [aminopotentidine]**	Aminopotentidine-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent H_2 histamine receptor antagonist (apparent K_D values are 8.94, 7.3 and >6 for H_2, H_3 and H_1 receptors respectively). Also antagonizes the activity of Histamine, a H_1 histamine receptor agonist. Displays no intrinsic activity.					
HB7826	**CellAura fluorescent H_3 antagonist [clobenpropit]**	Clobenpropit-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent H_3 histamine receptor antagonist (apparent K_D values are 7.09, 6.55 and 5.71 for H_3, H_1 and H_2 receptors respectively). Also antagonizes the activity of Histamine, a H_1 histamine receptor agonist. Displays no intrinsic activity.					
HB7827	**CellAura fluorescent M_3 antagonist [pirenzepine]**	Pirenzepine-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent M_3 muscarinic receptor antagonist (apparent K_D values are 7.97, 6.29 and 6.24 for M_3, M_5 and M_1 receptors respectively). Antagonizes the activity of carbachol, a muscarinic receptor agonist. Displays no intrinsic activity.					
HB7828	**CellAura fluorescent 5-HT_{1A} antagonist [NAN-190]**	NAN-190-derivative	*633/ 650 nm*	Red	*50µg*
Fluorescent 5-HT_{1A} serotonin receptor antagonist (apparent K_D values are 8.75, 6.34 and 5.57 for 5-HT_{1A}, 5-HT_{2A} and 5-HT_{1B} receptors respectively). Antagonizes the activity of serotonin, a 5-HT_{1A} agonist.					

Our price pledge

As scientists ourselves, we appreciate that it's tough obtaining research grants and funding. We want to support your research in every way we can, and so work hard to offer highly competitive prices for our products. How do we do this? Lots of ways really – firstly, we try to reduce our costs to bring the price down for you – perhaps by changing packaging, formulation, pack sizes, suppliers or the manufacturing process. Or, it may mean reduced margins – and that's fine by us too (up to a point!). But, we will not compromise on quality – ever.

The bottom line is that, overall, the prices we offer are fair and competitive – Hello Bio **prices are up to 50% less** than other suppliers such as Tocris Bioscience and Sigma Aldrich. And rest assured, we have a dedicated team regularly checking prices against other life science suppliers to make sure that we are giving you the best deal wherever we can.

The Hello BioPromise

You can trust that we will always offer the best quality products – our products are tested rigorously, both in house and by external suppliers, using a whole host of chemical and biological techniques.

If for any reason you are not completely happy with your product, we will offer a replacement or full refund. The process is straight forward and hassle free – simply contact our Customer Care team who will sort it all out for you.

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