# Datasheet

## Product overview

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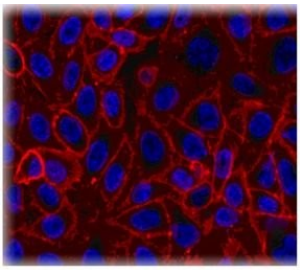
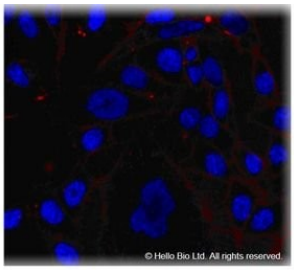
| **Name** | CA200887 CellAura fluorescent $M_3$ antagonist [pirenzepine] |
| **Cat No** | HB7827 |
| **Short description** | Fluorescent $M_3$ muscarinic receptor antagonist |
| **Biological description** | Fluorescent $M_3$ muscarinic receptor antagonist (apparent $K_D$ values are 7.97, 6.29 and 6.24 for $M_3$, $M_5$ and $M_1$ receptors respectively). Antagonizes the activity of carbachol, a muscarinic receptor agonist. Displays no intrinsic activity. |
| **Alternative names** | CA200887\|$M_3$-633-AN |
| **Biological action** | Antagonist |
| **Purity** | >97% |

## Images



HB7827 (30nM) binding to live CHO cells expressing muscarinic $M_3$ receptors.




Binding blocked by the unlabelled competitor 4-DAMP (10μM). Nuclei counter-stained with Hoechst.

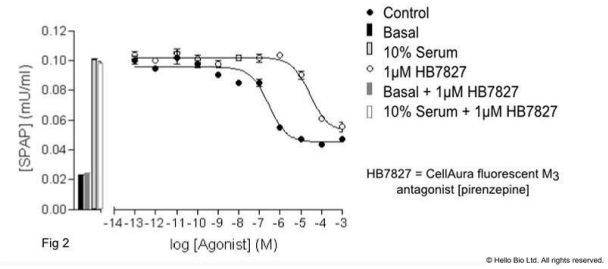



Fig 2

## Properties

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| **Molecular Weight** | 1014 |
| **Source** | Synthetic |
| **Formulation** | Lyophilized film |
| **Excitation** | 633 nm |
| **Emission** | 650 nm |

## Applications

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| **Application notes** | For imaging at the $M_3$ receptor use solutions up to 100 nM. |
| **Pharmacological validation** | The CellAura fluorescent $M_3$ antagonist [pirenzepine] ligand was shown to antagonize the activity of the muscarinic agonist, carbachol, in a recombinant CHO cell line expressing the human $M_3$ receptor and a serum-responsive secreted placental alkaline phosphatase (SPAP) reporter gene. The serum-induced expression of SPAP was measured under basal and serum-stimulated (maximal) conditions. Addition of CellAura fluorescent $M_3$ antagonist [pirenzepine] to the basal or serum-stimulated cells did not significantly alter basal and stimulated SPAP levels, demonstrating that CellAura fluorescent $M_3$ antagonist [pirenzepine] has no intrinsic agonist activity. To determine the apparent KD for CellAura fluorescent $M_3$ antagonist [pirenzepine], cells were treated with varying concentrations of carbachol alone, or in the presence of 1μM CellAura fluorescent $M_3$ antagonist [pirenzepine], and the serum-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 $M_3$ antagonist [pirenzepine], compared to the response curve for the agonist alone. |

## Storing and Using Your Product

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| **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. |