

Ref. P30425

G protein-coupled receptors (GPCRs) constitute a diverse and crucial family of membrane receptors that play a fundamental role in cellular signal transduction.

These receptors are involved in a multitude of physiological processes, ranging from sensory perception to the regulation of the cardiovascular system and immune response.

Their name stems from their ability to interact with G proteins, triggering intracellular signaling cascades in response to the binding of specific ligands.

The functional diversity of GPCRs, their involvement in numerous signaling pathways, and their significance in drug development make them a highly relevant area of research and therapeutics in cellular and molecular biology.



Innoprot

# OT RECEPTOR

## Calcium ASSAY

**Product Name:** HiTSeeker OT receptor cell line

**Reference:** P30425

**Recp. Official Full Name:** Oxytocin receptor

**DNA Accession Number:** NM\_000916

**Host Cell:** U2OS

**Resistance:** Hygromycin

**Quantity:**  $> 3 \times 10^6$  cells / vial

**Storage:** Liquid Nitrogen

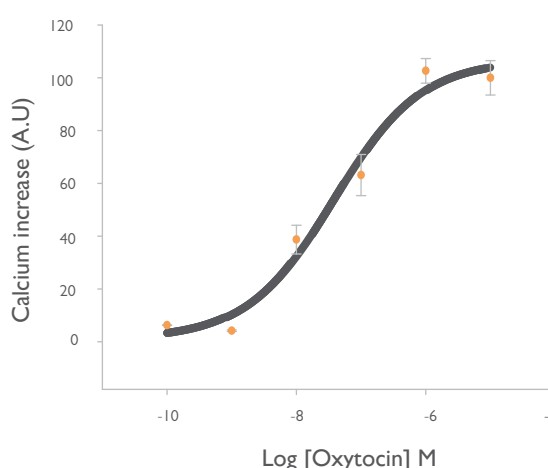


### About HiTSEEKER OT RECEPTOR (U2OS cell line)

Each vial of HiTSEEKER-OT receptor contains U2OS cells stably expressing Oxytocin receptor (untagged).

Innoprot HiTSeeker OT receptor cell line has been designed to assay compounds or analyze their capability to modulate Oxytocin receptor. When the agonist binds to OXTR a G protein is activated, which in turn, triggers a cellular response mediated by second messengers ( $\text{Ca}^{2+}$ ).

This cell line has been validated measuring Calcium increase in the cytosol using Fluo4. The high reproducibility of this assay allows monitoring OT receptor activation process in High Throughput Screening.



**Figure 1. Agonism dose-response curve.** Cells were stimulated with increasing dilutions of Oxytocin. Calcium concentration was detected with Fluo4. Data were normalized as percentages of activity of the highest concentration (Oxytocin 10  $\mu\text{M}$ ).

$\text{EC}_{50}$ :  $3.8 \times 10^{-8}$  M

$Z'$ : 0.74