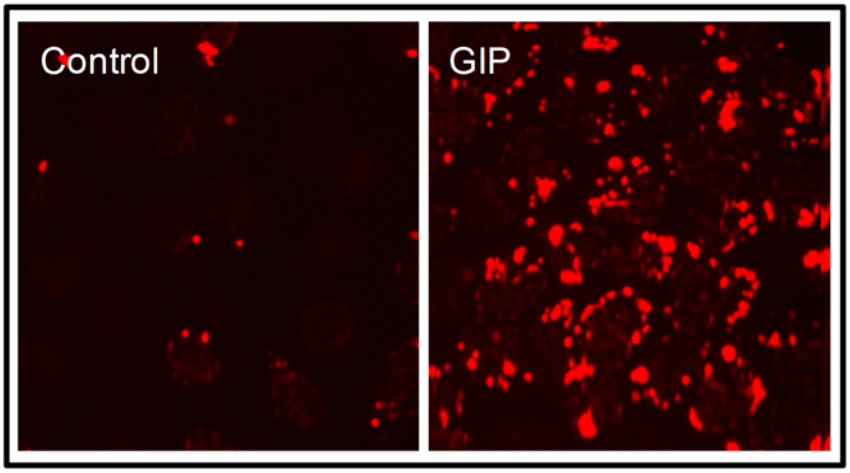
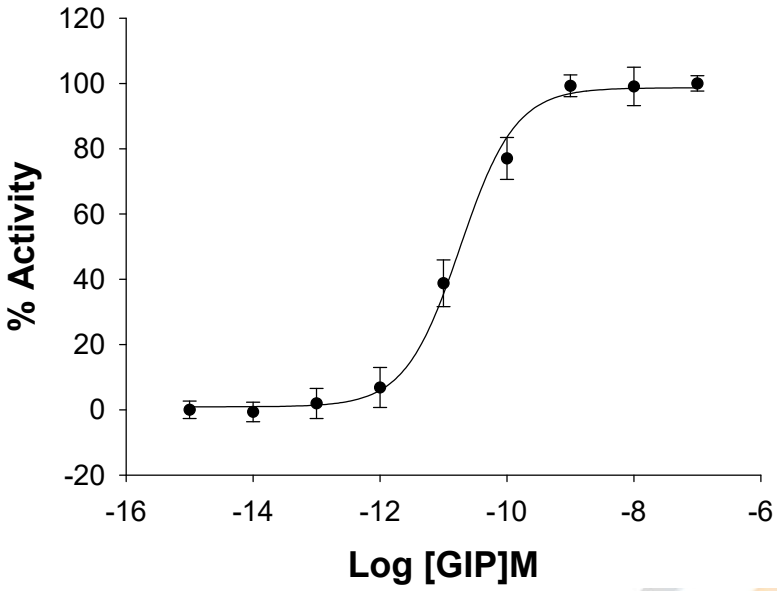
REF: P70529

cAMPNomad-FP650 cell lines

Human Gastric Inhibitory Polypeptide Receptor (GIP-R)





Red cAMPNomad-GIPR (U2OS cell line)

EC_{50} GIP: $1{,}83 \times 10^{-11}$ M

Z´: 0.84+/- 0.01

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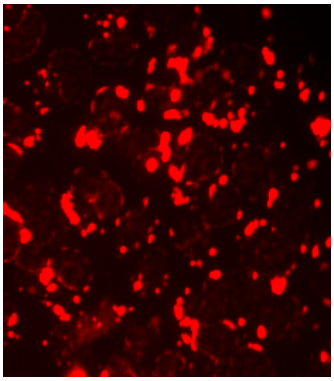

Product Name: GIPR $_{cAMP}$Nomad cell line

Reference: P70529

Official Name: Human Gastric Inhibitory Polypeptide Receptor

DNA Accession Number: NP_000155

Host Cell: U2OS

Resistance: G418 + Puromycin

Quantity: > 3 x 10^6 cells / vial

Storage: Liquid Nitrogen

Assay Briefly description

Each vial of $_{cAMP}$Nomad GIPR contains U2OS cells stably expressing $_{cAMP}$Nomad-FP650 biosensor and human gastric inhibitory polypeptide receptor (with no tag).

Innoprot $_{cAMP}$Nomad GIPR cell line has been designed to assay compounds or analyze their capability to modulate gastric inhibitory polypeptide receptor. When an agonist binds to GIPR a G protein is activated, which in turn, triggers a cellular response mediated by cAMP. This cell line has been validated measuring cAMP decrease in the cytosol analyzing $_{cAMP}$Nomad biosensor distribution within the cell. This cell line allows the image analysis of the stimuli induced by the compounds.

This highly reproducible assay has been validated using GIP as agonist in a High Throughput Analysis (HTA).

About Red $_{cAMP}$Nomad Biosensor

Red $_{cAMP}$Nomad Biosensor is a fluorescent polypeptide that in the presence or absence of cAMP changes its localization within the cell.

Before cAMP production stimulation, the fluorescent biosensor is localized in the cellular membrane. An increase/decrease in this second messenger concentration leads to a change in the structural folding of red $_{cAMP}$Nomad Biosensor promoting its cellular relocation in the vesicular trafficking of the cells.

In a cell line co-expressing red $_{cAMP}$Nomad Biosensor and a GPCR of interest, the activity can be easily quantified on living cells by image analysis of fluorescence granularity or fluorescence intensity analysis.

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cAMP Assay

Red cAMPNomad U2OS cells, stably expressing gastric inhibitory polypeptide receptor (GIPR), were stimulated with 8 log dilution series ranging from 0 to 100 µM of GIP during 24h (n=5). % Activity was calculated relative to positive (100 µM).

Intensity analysis

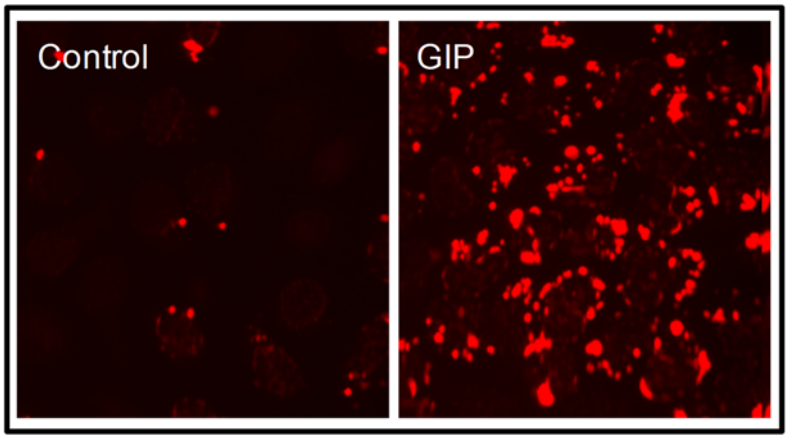

Fig1. Red cAMPNomad biosensor negative control and GIP stimulation.

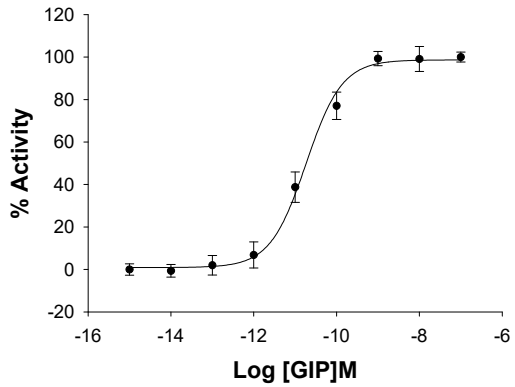

Fig2. Concentration response curve for gastric inhibitory polypeptide receptor cell line analyzed using "Synergy 2" microplate reader from Biotek. The Ec_{50} for GIP was $1{,}83x10^{-11}$ M after a treatment of 24 h with the agonist. The assay was validated with an average of Z´= 0.84 +/- 0.01.

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