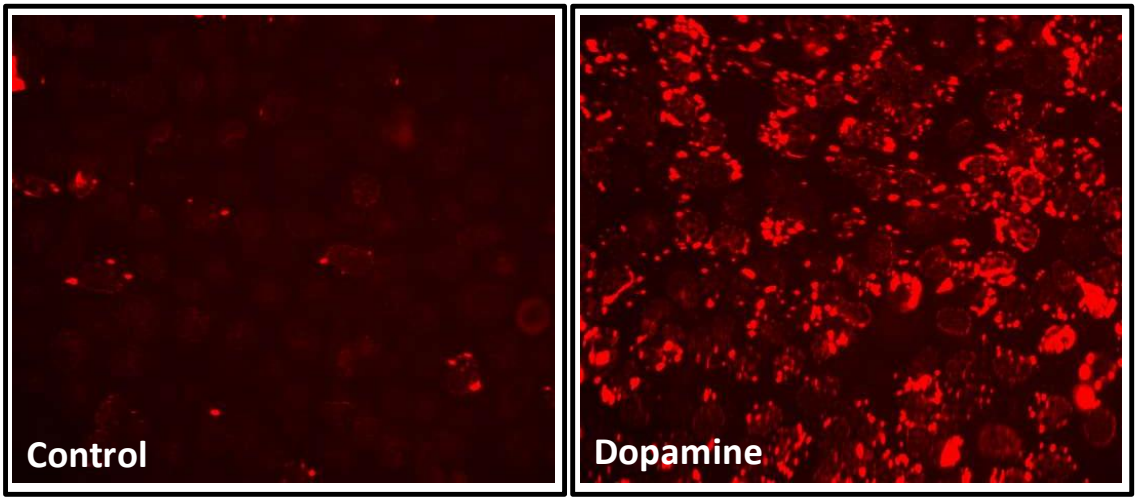
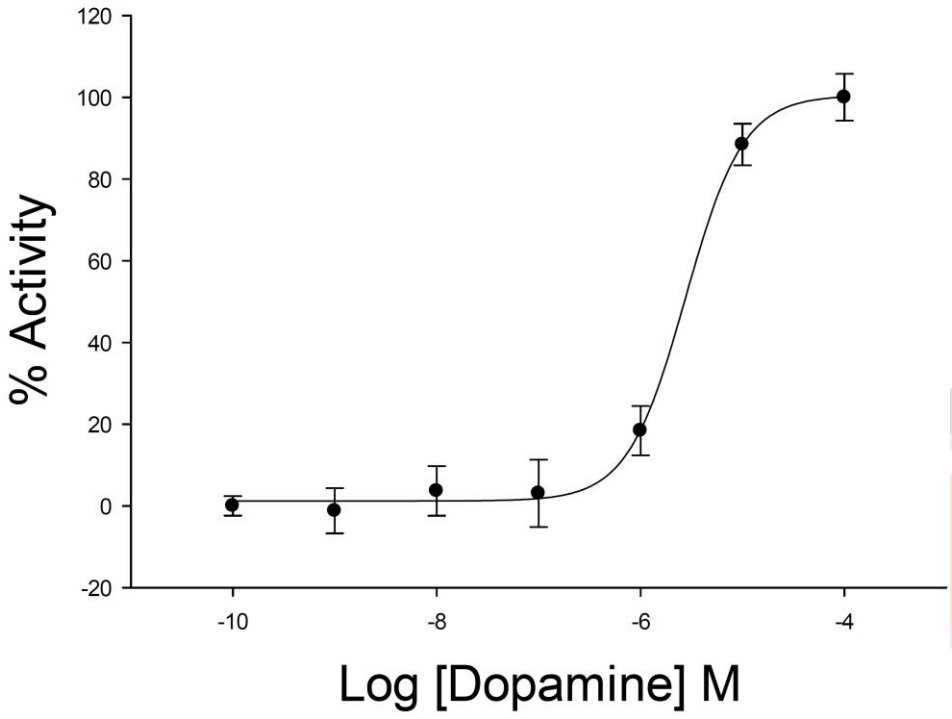
REF: P70518

cAMP NOMAD-FP650 CELL LINES

-DOPAMINE RECEPTOR D2 (DRD2)-





Red $_{cAMP}$Nomad-DRD2 (U2OS cell line)

Ec_{50} Dopamine: $2.76x10^{-6}$ M

Z´: 0.76

VAT No. ESB95481909

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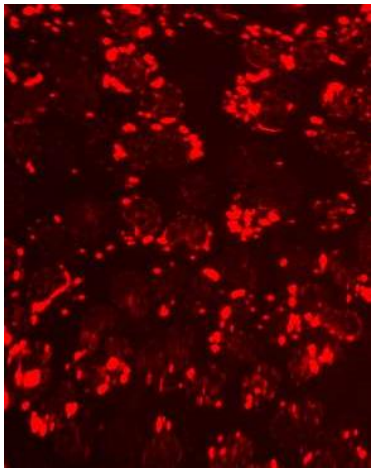

Product Name: DRD2 cAMPNomad cell line
Reference: P70518
Recep. Official Full Name: Dopamine receptor D2
DNA Accession Number: KY243031.1
Host Cell: U2OS
Resistance: G418 + Puromycin
Quantity: > 3 x 10^6 cells / vial
Storage: Liquid Nitrogen

Assay Briefly description

Each vial of red cAMPNomad-DRD2 contains U2OS cells stably expressing red cAMPNomad biosensor and Dopamine receptor D2 (with no tag).

Innoprot´s red cAMPNomad-DRD2 cell line has been designed to assay compounds or analyze their capability to modulate Dopamine receptor D2. When an agonist binds to DRD2 a G protein is activated, which in turn, triggers a cellular response mediated by cAMP.

This cell line has been validated measuring cAMP increase in the cytosol analyzing red cAMPNomad 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 Dopamine as agonist in a High Content Analysis (HCA) and a High Throughput Analysis (HTA).

About Red cAMPNomad Biosensor

Red cAMPNomad 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 in this second messenger concentration leads to a change in the structural folding of red cAMPNomad Biosensor promoting its cellular relocation in the vesicular trafficking of the cells.

In a cell line co-expressing red cAMPNomad 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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cAMPNomad U2OS cells, stably expressing Dopamine receptor D2 (DRD2), were stimulated with 9 log dilution series ranging from 0 to 100 µM of Oxotremorine during 24h (n=4). %Activity was calculated relative to positive (100 µM).

Fluorescence intensity analysis

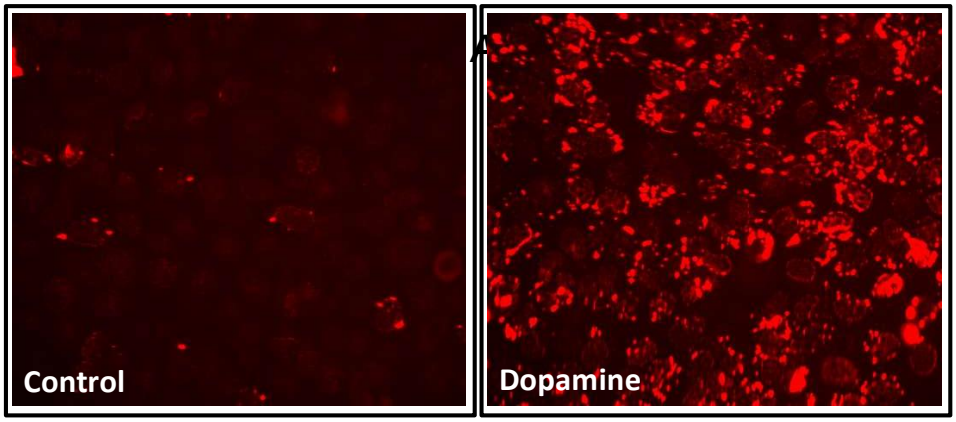

Fig1. Red cAMPNomad biosensor negative control and Dopamine stimulation.

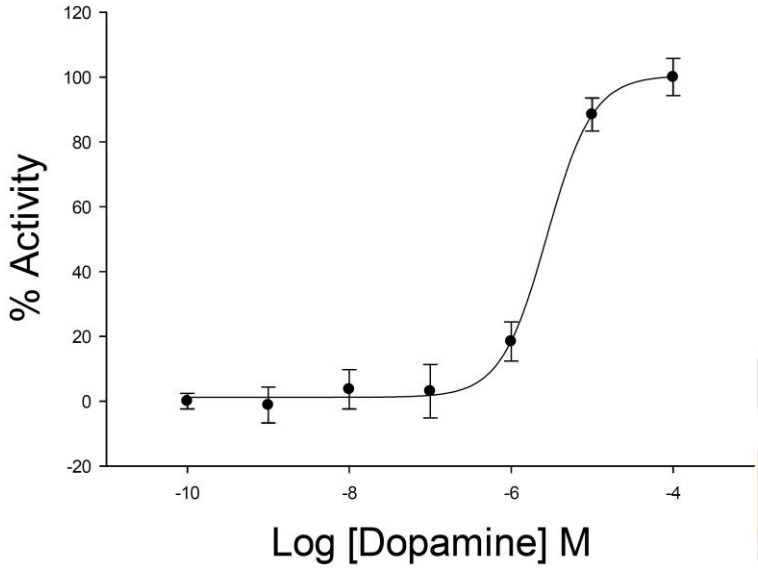

Fig 2. Concentration-response curve for Dopamine in Red cAMPNomad-TSHR cell line analyzed using "Synergy 2" microplate reader from Biotek. The EC50 for Dopamine was $2.76x10^{-6}$ M after a treatment of 24 h with the agonist. The assay was validated with an average of Z´= 0.76.