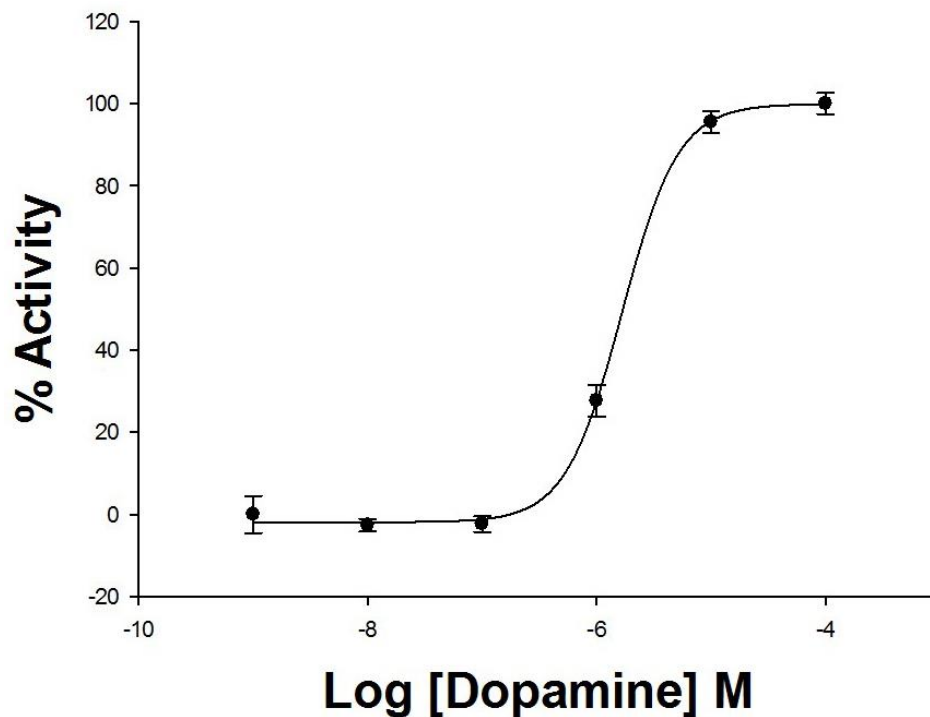
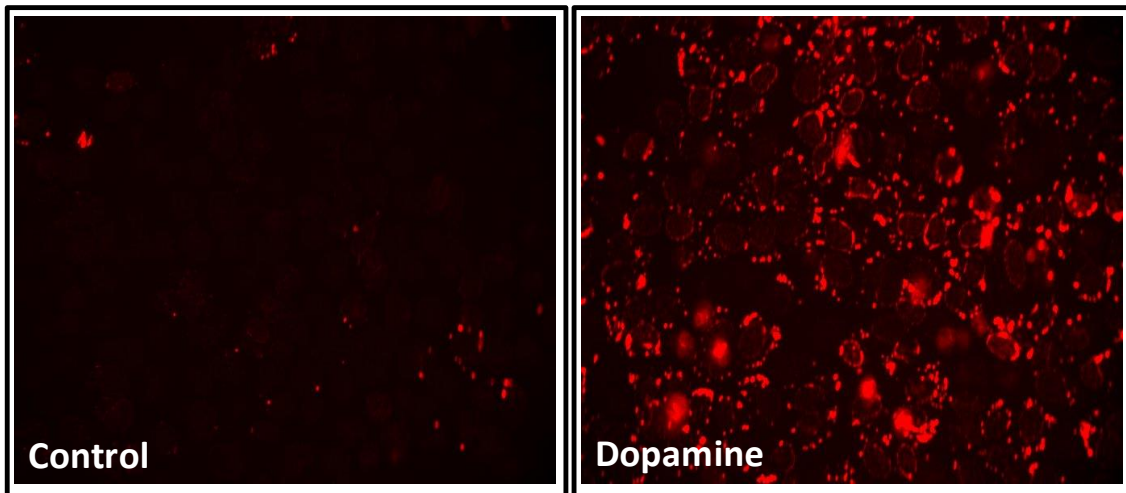


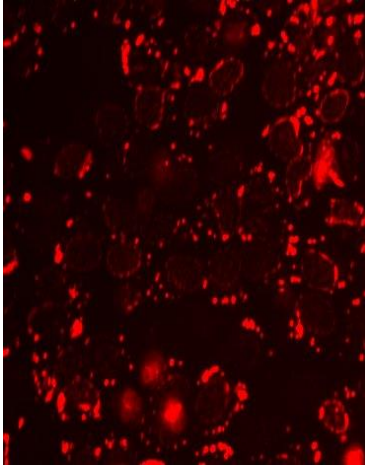
cAMP NOMAD-FP650 CELL LINES -DOPAMINE RECEPTOR D5 (DRD5)-



Red $cAMP$ Nomad-DRD5 (U2OS cell line)

EC_{50} Dopamine: 1.66×10^{-6} M

Z' : 0.79



Product Name: DRD5_{cAMP}Nomad cell line
Reference: P70509
Recep. Official Full Name: Dopamine receptor D5
DNA Accession Number: NC_000004.12
Host Cell: U2OS
Resistance: G418 + Puromycin
Quantity: > 3 x 10⁶ cells / vial
Storage: Liquid Nitrogen

Assay Briefly description

Each vial of red_{cAMP}Nomad-DRD5 contains U2OS cells stably expressing red_{cAMP}Nomad biosensor and Dopamine receptor D5 (with no tag).

Innoprot's red_{cAMP}Nomad-DRD5 cell line has been designed to assay compounds or analyze their capability to modulate Dopamine receptor D5. When an agonist binds to DRD5 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_{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 Dopamine as agonist in a High Content Analysis (HCA) and 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 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.

cAMPNomad U2OS cells, stably expressing Dopamine receptor D5 (DRD5), were stimulated with 9 log dilution series ranging from 0 to 100 μ M of Oxotremorine during 24h (n=4). %Activity was calculated relative to positive (100 μ M).

Fluorescence intensity analysis

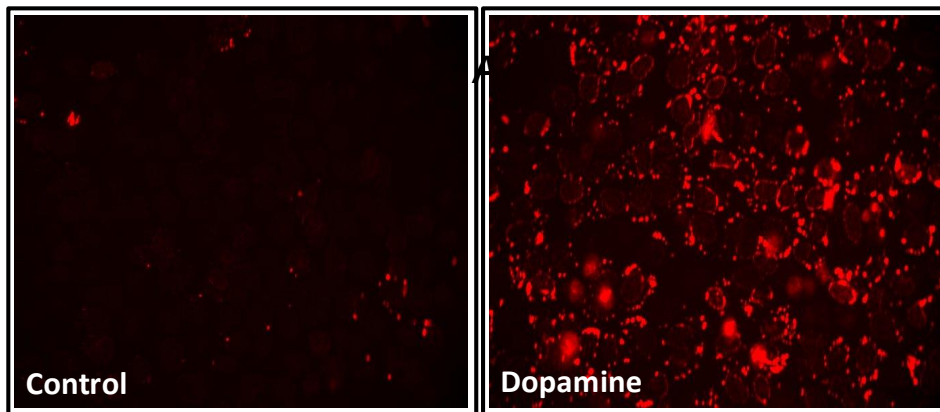


Fig1. Red cAMPNomad biosensor negative control and Dopamine stimulation.

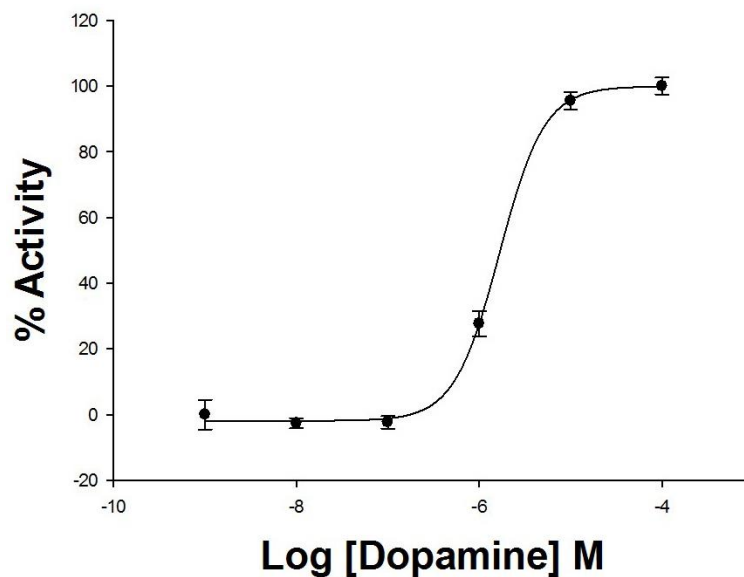


Fig 2. Concentration-response curve for Dopamine in Red cAMPNomad-TSHR cell line analyzed using “Synergy 2” microplate reader from Biotek. The EC50 for Dopamine was 1.66×10^{-6} M after a treatment of 24 h with the agonist. The assay was validated with an average of $Z' = 0.79$.