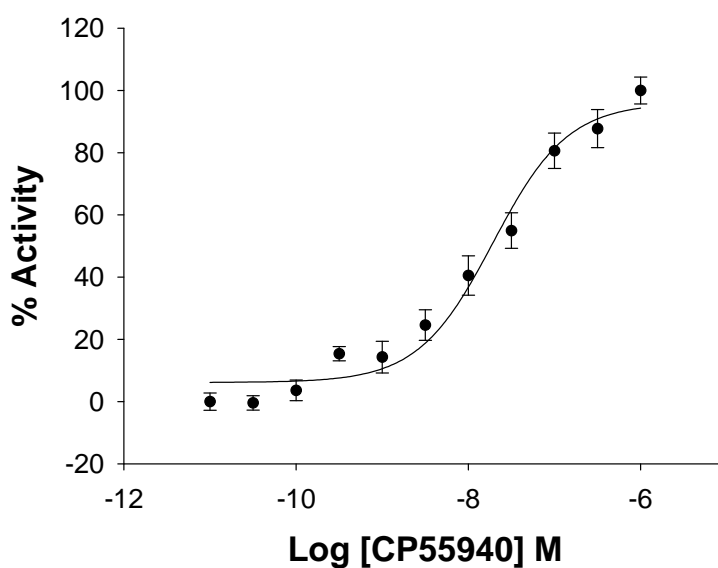
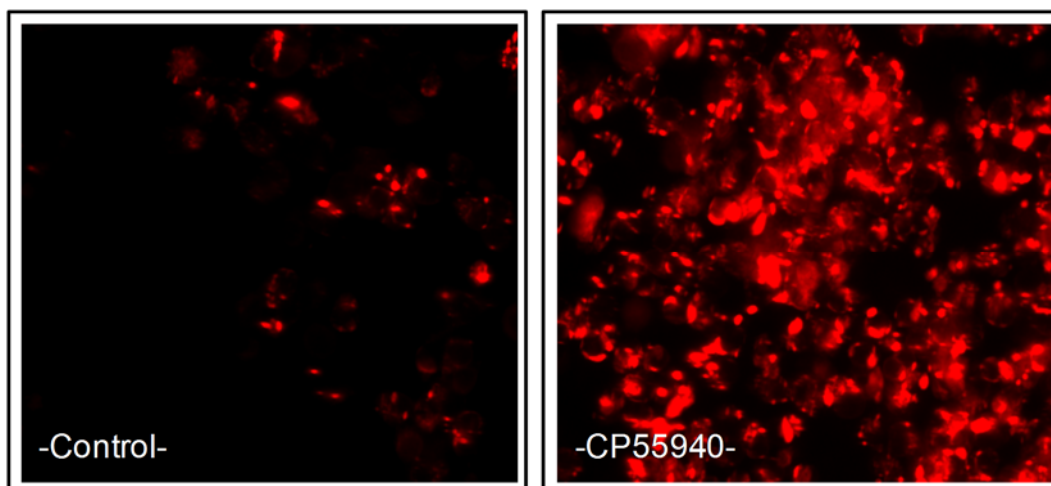


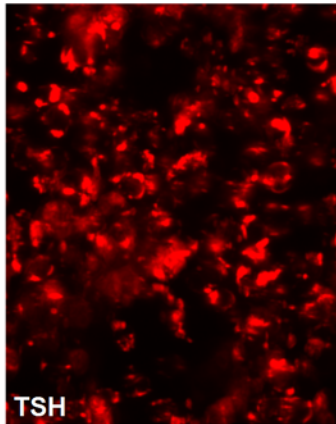
cAMP NOMAD-FP650 cell lines CANNABINOID RECEPTOR 1 (CB1)



Red $cAMP$ Nomad-CB1 (HEK293 cell line)

EC_{50} CP55940: $1,59 \times 10^{-8} M$

Z' : 0.79 ± 0.01



Product Name: CB1_{cAMP}Nomad cell line

Reference: P70527

Recp. Official Full Name: Cannabinoid receptor 1

DNA Accession Number: AY225225

Host Cell: HEK293

Resistance: G418 + Hygromycin

Quantity: > 3 x 10⁶ cells / vial

Storage: Liquid Nitrogen

Assay Briefly description

Each vial of _{cAMP}Nomad CB1 contains HEK293 cells stably expressing _{cAMP}Nomad-FP650 biosensor and cannabinoid receptor 1 (with no tag).

Innoprot _{cAMP}Nomad CB1 cell line has been designed to assay compounds or analyze their capability to modulate cannabinoid receptor1. When an agonist binds to CB1 a G protein is activated, which in turn, triggers a cellular response mediated by cAMP. This cell line has been validated analyzing _{cAMP}Nomad biosensor fluorescence intensity 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 CP55940 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 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.

cAMP Assay

Red_{cAMP}Nomad HEK293 cells, stably expressing Cannabinoid receptor 1 (CB1) were stimulated with 11 log dilution series ranging from 0 to 1 μ M of CP55940 during 24h (n=5). % Activity was calculated relative to positive (1 μ M).

Fluorescence intensity analysis

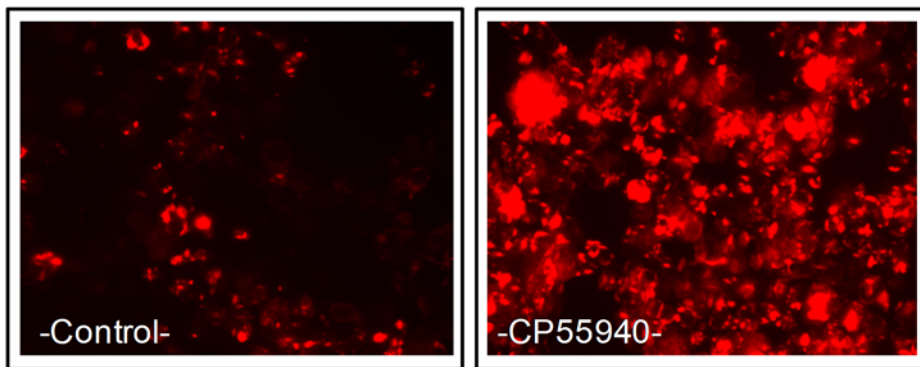


Fig1. Red_{cAMP}Nomad biosensor negative control and CP55940 stimulation.

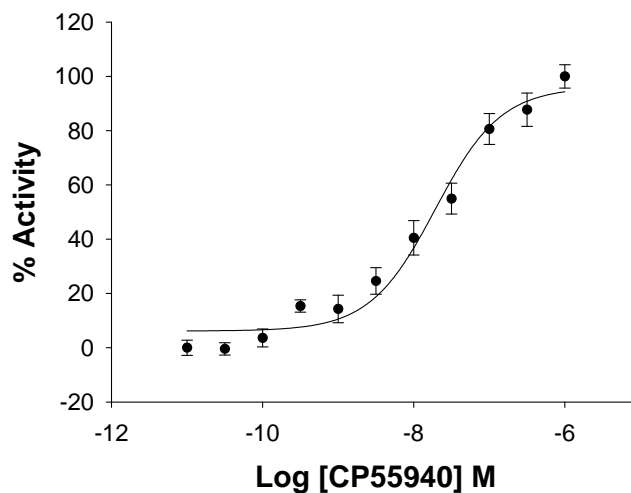


Fig 2. Concentration-response curve for CP55940 in Red_{cAMP}Nomad-CB1 cell line analyzed using “Synergy 2” microplate reader from Biotek. The E_{c50} for CP55940 was $1,59 \times 10^{-8}$ M after a treatment of 24 h with the agonist. The assay was validated with an average of $Z' = 0.79 \pm 0.01$.