Tango™ OPRL1-*bla* U2OS DA cells

Tango™ OPRL1-*bla* U2OS cells

Catalog Numbers – K1792 and K1786

Cell Line Descriptions

Tango™ OPRL1-*bla* U2OS cells and Tango™ OPRL1-bla U2OS DA cells contain the human Opioid Receptor-Like 1 (OPRL1) linked to a TEV protease site and a Gal4-VP16 transcription factor stably integrated into the Tango™ GPCR-*bla* U2OS parental cell line. This parental cell line stably expresses a beta-arrestin/TEV protease fusion protein and the beta-lactamase (*bla*) reporter gene under the control of a UAS response element

DA cells are irreversibly division arrested using a low-dose treatment of Mitomycin-C, and have no apparent toxicity or change in cellular signal transduction. Both the Tango™ OPRL1-*bla* U2OS cells and the Tango™ OPRL-*bla* U2OS DA cells have been functionally validated for Z' factor and EC_{50} concentrations of U-50,488 (Figure 1

Validation Summary

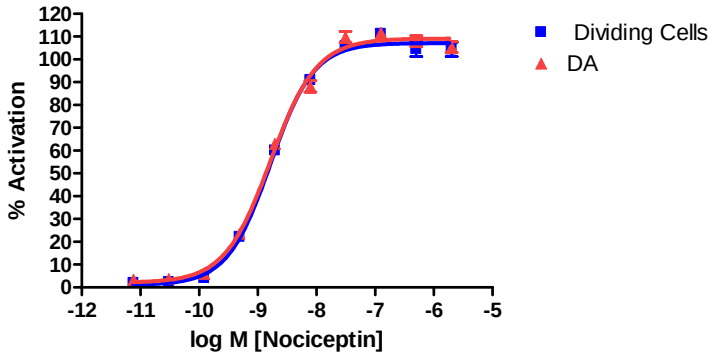
Testing and validation of this assay was evaluated in a 384-well format using LiveBLAzer™-FRET B/G Substrate.

1. Orphanin FQ dose response under optimized conditions

	Dividing Cells
EC_{50}	1.64 nM
Z'-factor	0.76
Recommended cell no. /well	= 10,000
Recommended Stim. Time	= 5 hrs
Max. [Stimulation]	= 2000 nM

Primary Agonist Dose Response

Figure 1 — Tango™ OPRL1-*bla* U2OS and Tango™ OPRL1-*bla* U2OS DA cell dose response to Orphanin FQ under optimized conditions



Tango™ OPRL1-*bla* U2OS cells and Tango™ OPRL1-*bla* U2OS DA cells (10,000 cells/well) were plated in a 384-well format and incubated for 16-20 hours. Cells were stimulated with a dilution series of Orphanin FQ (Tocris 910) in the presence of 0.1% DMSO for 5 hours. Cells were then loaded with LiveBLAzer™-FRET B/G Substrate for 2 hours. Fluorescence emission values at 460 nm and 530 nm were obtained using a standard fluorescence plate reader and % Activation plotted for each replicate against the concentrations of Orphanin FQ.