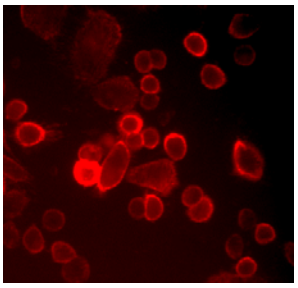
REF: P30506

CELL LINES

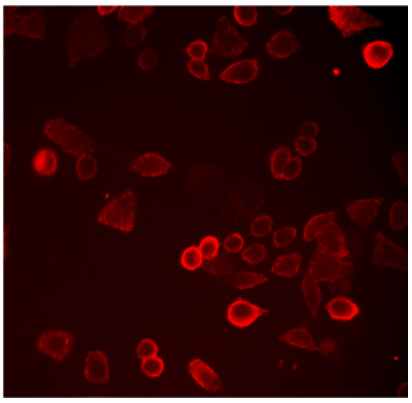
- CTLA4 CHO-K1-luc CELL LINE -



Product Name:	CTLA4 CHO-K1-luc cell line
Catalog Number:	P30506
Cell Line:	CHO-K1
Resistance:	Puromycin + G418
Format:	>3 x 10^6 cells in Cryopreserved vials
Storage:	Liquid Nitrogen

CTLA4 CHO-K1-luc cell line

The CTLA4 CHO-K1-luc cell line has been developed by stable co-transfection with a human T-lymphocyte-associated protein 4 (CTLA4) and Luc proteins expression plasmids. CTLA4 CHO-K1-luc cell line provides consistent levels of expression of Luc and CTLA4 proteins



This cell line is intended to be used as an “in vitro” model for research studies.

About CTLA4 protein

CTLA-4 (CD152) is a B7/CD28 family member that inhibits T cell functions.
CTLA-4 mediates immunosuppression by indirectly diminishing signaling through the co-stimulatory receptor CD28.

Cancer: By limiting CD28-mediated signaling during antigen presentation, CTLA-4 increases the activation threshold of T cells, reducing immune responses to weak antigens such as self- and tumor antigens. Some anti-cancer therapies based in Anti-CTLA-4 monoclonal antibody therapy has revealed promising results in certain types of cancers, particularly melanoma.

Bibliography: Seidel, J. A., Otsuka, A., & Kabashima, K. (2018). Anti-PD-1 and Anti-CTLA-4 Therapies in Cancer: Mechanisms of Action, Efficacy, and Limitations. Frontiers in oncology, 8, 86. https://doi.org/10.3389/fonc.2018.00086

Wolchok, J.D. and Saenger, Y. (2008), The Mechanism of Anti-CTLA-4 Activity and the Negative Regulation of T-Cell Activation. The Oncol, 13: 2-9. doi:10.1634/theoncologist.13-S4-2
https://doi.org/10.1634/theoncologist.13-S4-2

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RT-PCR analysis

The presence of CTLA4 mRNA was analyzed by RT-PCR.

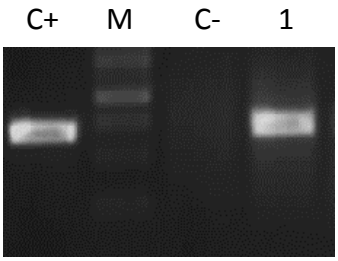

Figure 1. CTLA4 RT-PCR anaylisis. (1) CTLA4 CHO-K1 cell line. Positive Control (C+): CTLA4 cDNA. Negative Control (C-): not transfected CHO-K1 cells.

Luciferase assay

Double positive clones were verified with a luciferase assay kit from Sigma (#LUC1). Luminiscence detection was carried out with the Synergy 2 Multi-Mode Microplate reader from BioTek.

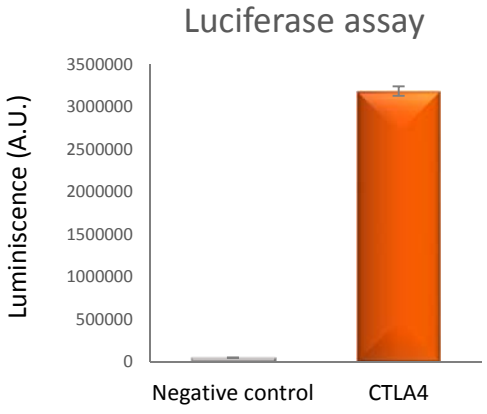

Figure 3. Luciferase anaylisis. The graph shows the luminescence detection of negative control (non-transfected CHO-K1 cells, grey) and CTLA4 CHO-K1-luc cell line (orange).

Immunofluorescence analysis

The detection of CTLA4 protein in the cells surface was carried out by immunofluorescence analysis with a Phycoerythrin (PE) tagged anti-CTLA4 antibody.

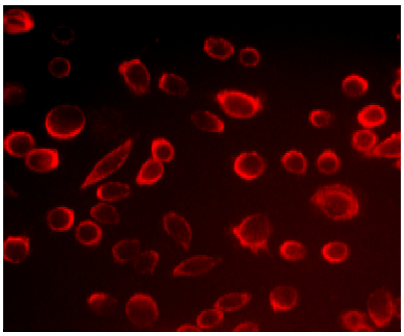

Figure 2. **Immunofluorescence assay**. The image shows the membrane localization of CTLA4 in the CHO-K1-luc cell line.

Flow Cytometry analysis

The detection of CTLA4 protein in the cells surface and the ratio of positive cells in the population was carried out by cytometry analysis with a Phycoerythrin (PE) tagged anti-CTLA4 antibody.

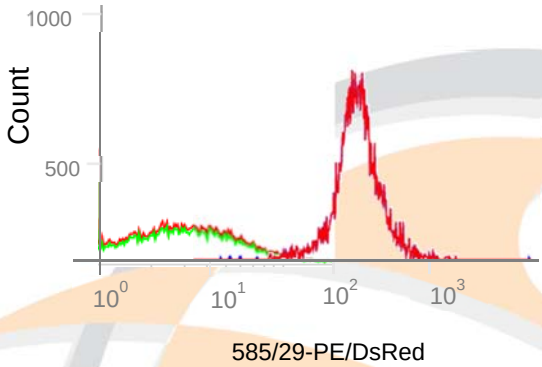

Figure 3. **Cytometry assay**. The graph shows the detection of CTLA4 protein in the surface of non-transfected CHO-K1 cell line (left curve) and CTLA4-CHO-K1-luc cell line (right curve).

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Quality Control

All cells are performance assayed and test negative for mycoplasma, bacteria, yeast and fungi. Cell viability, morphology and proliferative capacity are measured after recovery from cryopreservation. Innoprot guarantees stable expression for many generations and provides support for cell culture and visualization.

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