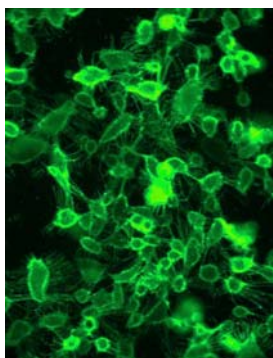


## CELL LINES

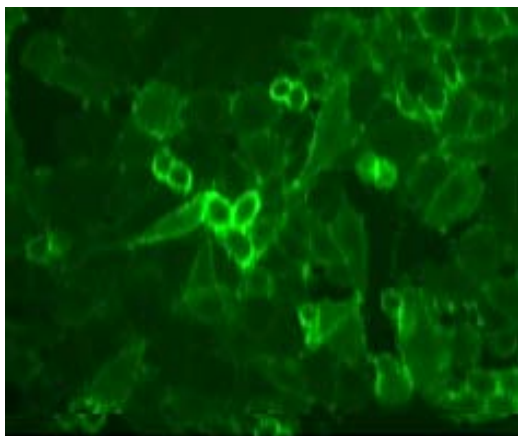
### - mTNF $\alpha$ CHO-K1 CELL LINE -



<b>Product Name:</b>	mTNF $\alpha$ CHO-K1 cell line
<b>Catalog Number:</b>	P30501
<b>Cell Line:</b>	CHO-K1
<b>Resistance:</b>	Puromycin
<b>Format:</b>	>3x10 <sup>6</sup> cells in Cryopreserved vials
<b>Storage:</b>	Liquid Nitrogen

#### mTNF $\alpha$ CHO-K1 cell line

The mTNF $\alpha$  CHO-K1 cell line has been developed by stable transfection with a human membrane bound TNF- $\alpha$  (mTNF $\alpha$ ) protein expression plasmid. mTNF $\alpha$  CHO-K1 cell line provides consistent levels of expression of human mTNF- $\alpha$  protein in cells surface.



This cell line is intended to be used as an “in vitro” model for research studies, such as Screening for TNF- $\alpha$  binding molecules in a cellular context.

#### About mTNF $\alpha$ protein

TNF $\alpha$  is a major inflammatory cytokine involved in the inflammatory response.

Higher levels of membrane bound isoform of TNF $\alpha$  has been related with better survival rates of lung tumor patients.

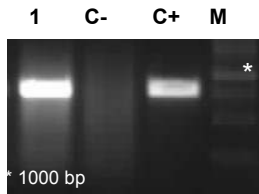
Besides, it has been reported that microtubule-targeting agents (MTAs), a class of most widely used chemotherapeutics, take advantage of the natural tight contact of tumor cells and utilize mTNF-mediated death signaling to induce the tumor regression.

Therefore, mTNF $\alpha$  can serve as a marker for patient responsiveness.

**Bibliography:** Horiuchi, T., Mitoma, H., Harashima, S., Tsukamoto, H., & Shimoda, T. (2010). Transmembrane TNF- $\alpha$ : structure, function and interaction with anti-TNF agents. *Rheumatology (Oxford, England)*, 49(7), 1215–1228. <https://doi.org/10.1093/rheumatology/keq031>. Zhang, J., Yang, Y., Zhou, S. et al. Membrane-bound TNF mediates microtubule targeting chemotherapeutics induced cancer cytotoxicity via juxtacrine inter-cancer-cell death signaling. *Cell Death Differ* (2019). <https://doi.org/10.1038/s41418-019-0441-3>

### RT-PCR analysis

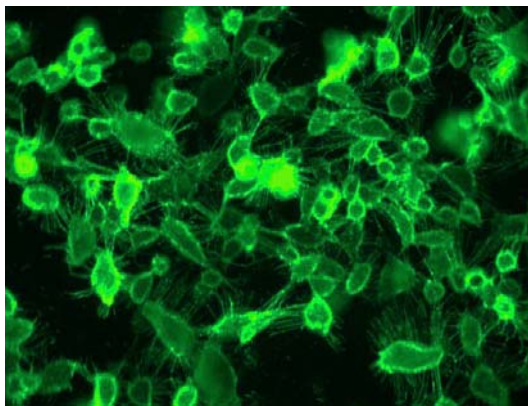
The presence of mTNF- $\alpha$  mRNA was analyzed by RT-PCR, using as positive control GADPH housekeeping gene mRNA.



**Figure 1. mTNF- $\alpha$  RT-PCR analysis.** (1) mTNF- $\alpha$  CHO-K1 cell line. Positive Control (C+): mTNF- $\alpha$  cDNA. Negative Control (C-): not transfected CHO-K1 cells.

### Immunofluorescence analysis

The detection of mTNF- $\alpha$  protein in the cells surface was carried out by immunofluorescence analysis with a FITC tagged anti- mTNF- $\alpha$  antibody.



**Figure 2. Immunofluorescence assay.** The image shows the membrane localization of mTNF $\alpha$  in CHO-K1 cell line.

### 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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