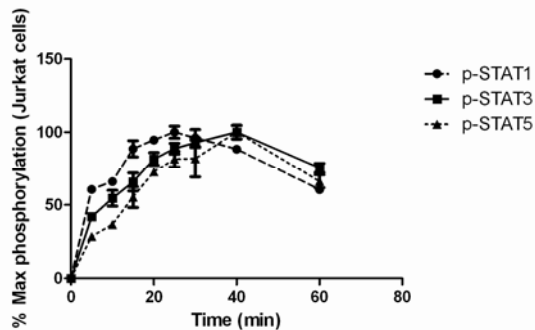


# Jurkat cells

## Handling suggestions for Jurkat cells

Jurkats are an IL-2 producing T lymphocyte cell line, commonly used to study T cell signaling. Established from the peripheral blood of a 14 year old boy with T cell leukemia, Jurkat cells are also useful for studying acute T cell leukemia. Jurkat cells are easy to culture, and grow rapidly. They express readily detectable levels of STAT1, STAT3 and STAT5, and so are useful for analysis of cytokine signaling. Jurkat cells are also useful for looking at stress-mediated pathways, including p38 MAPK, JNK signaling, and NF- $\kappa$ B signaling.



Timecourse of stimulation of STAT phosphorylation in Jurkat cells. Phosphorylation of STAT proteins is mediated by IFN $\alpha$  stimulation. Phosphorylation detected by AlphaScreen<sup>®</sup> SureFire<sup>®</sup> cellular assay kits.

**Morphology:** T Lymphocyte

**Source:** blood

**Growth:** suspension

**Organism:** Human

**Suggested media:**

RPMI (Gibco Cat#11885) supplemented with 10% FBS (Gibco)

1% Sodium pyruvate (Gibco Cat#11360)

1% Pen Strep Glutamine (Gibco Cat#10378)

**Culturing suggestions:**

Maintain cells at densities in the range of  $2 \times 10^5$  –  $2 \times 10^6$  cells/mL.

Add fresh media as required.

**Detectable signaling pathways:**

STAT,

p38

JNK

NF- $\kappa$ B

**Known Receptors:**

IFN $\alpha$ , TNF $\alpha$