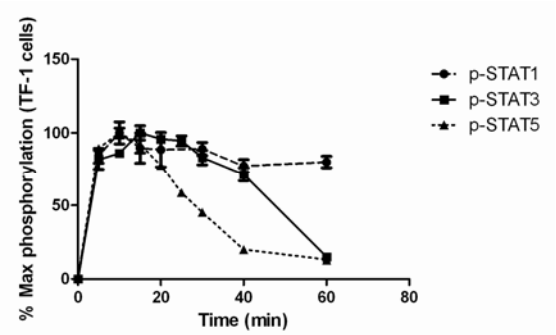
TF-1 cells

Handling suggestions for TF-1 cells

The TF-1 cell line was established from a heparinized bone marrow aspiration sample from a 35 year old male with severe pancytopenia. The cells are completely dependent on IL-3 or GM-CSF for culturing, but in the presence of these factors grows rapidly. TF-1 cells respond to a variety of cytokines, and is a useful tool for studying cytokine signaling mechanisms because they carry a wide range of endogenous receptors. Phosphorylation of endogenous STAT1, STAT3 and STAT5 is readily detectable in these cells, and provides a convenient marker for cytokine response.



Timecourse of stimulation of STAT phosphorylation in TF-1 cells. STAT 1 phosphorylation is stimulated by IFNγ, STAT3 phosphorylation is stimulated by IL-6 and STAT5 phosphorylation is stimulated by GM-CSF. Phosphorylation detected by AlphaScreen® SureFire® cellular assay kits.

Morphology: lymphoblast
Source: blood
Growth: suspension
Organism: Human
Sources: ATCC: CRL-2003
ECACC Cat# 93022307

Suggested media:
RPMI (Gibco Cat#11885) supplemented with 10% FBS (Gibco) and 2 ng/mL GM-CSF (R&D Systems, Cat# 215-GM)
1% Sodium pyruvate (Gibco Cat#11360)
1% Pen Strep Glutamine (Gibco Cat#10378)

Culturing suggestions:
Maintain cells at densities in the range of $5x10^4$ – $5x10^5$ cells/mL.

Add fresh media as required.

Detectable signaling pathways:
STAT

Known Receptors:
IL-3, IL-6, GM-CSF, IFNγ

TGR TECHNICAL NOTE