

# Tyk 2 (G-18): sc-30671

## BACKGROUND

Tyk-2 belongs to the family of non-receptor janus tyrosine kinases, which regulate a spectrum of cellular functions occurring downstream of activated cytokine receptors in the lympho-hematopoietic system. Immunological stimuli, such as interferons and cytokines, recruit STAT transcription factors to the cytokine receptor where Tyk2 is associated. Tyk2 then phosphorylates proximal STAT factors, which subsequently dimerize, translocate to the nucleus, and bind to cis elements upstream of target gene promoters to regulate transcription. The canonical Jak-STAT pathway is integral to maintaining a normal immune system by stimulating proliferation, differentiation, survival, and host resistance to pathogens. Cytokine induced pro-inflammatory responses are attractive targets for anti-inflammatory therapies, specifically at the level of Jak-STAT signaling.

## REFERENCES

- Leonard, W.J., et al. 1998. Jaks and STATs: biological implications. *Annu. Rev. Immunol.* 16: 293-322.
- Murakami, Y., et al. 1998. Constitutive activation of Jak-2 and Tyk-2 in a v-Src-transformed human gallbladder adenocarcinoma cell line. *J. Cell Physiol.* 175: 220-228.
- Subramaniam, S.V., et al. 1999. Evidence for the involvement of JAK/STAT pathway in the signaling mechanism of interleukin-17. *Biochem. Biophys. Res. Commun.* 262: 14-19.
- Kotenko, S.V., et al. 2000. Jak-Stat signal transduction pathway through the eyes of cytokine class II receptor complexes. *Oncogene* 19: 2557-2565.

## CHROMOSOMAL LOCATION

Genetic locus: TYK2 (human) mapping to 19p13.2; Tyk2 (mouse) mapping to 9 A3.

## SOURCE

Tyk 2 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Tyk 2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30671 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Tyk 2 (G-18) is recommended for detection of Tyk 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

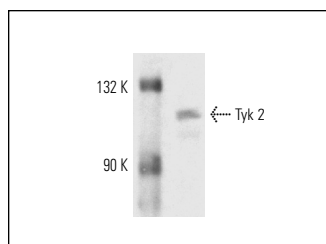
Tyk 2 (G-18) is also recommended for detection of Tyk 2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Tyk 2 siRNA (h): sc-36764, Tyk 2 siRNA (m): sc-36765, Tyk 2 shRNA Plasmid (h): sc-36764-SH, Tyk 2 shRNA Plasmid (m): sc-36765-SH, Tyk 2 shRNA (h) Lentiviral Particles: sc-36764-V and Tyk 2 shRNA (m) Lentiviral Particles: sc-36765-V.

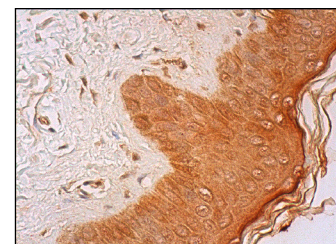
Molecular Weight of Tyk 2: 115/130 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Jurkat whole cell lysate: sc-2204 or MEG-01 cell lysate: sc-2283.

## DATA



Tyk 2 (G-18): sc-30671. Western blot analysis of Tyk 2 expression in MEG-01 whole cell lysate.



Tyk 2 (G-18): sc-30671. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic and nuclear staining of fibroblasts, keratinocytes and Langerhans cells.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **Tyk 2 (C-8): sc-5271** or **Tyk 2 (H-4): sc-166686**, our highly recommended monoclonal alternatives to Tyk 2 (G-18).