

Tyk 2 (H-4): sc-166686

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 Tyk 2 is associated. Tyk 2 then phosphorylates proximal Stat factors, which subsequently dimerize, translocate to the nucleus and bind to *cis* elements upstream of target gene promoters to regulating 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

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- Murakami, Y., et al. 1998. Constitutive activation of JAK2 and Tyk 2 in a v-Src-transformed human gallbladder adenocarcinoma cell line. *J. Cell. Physiol.* 175: 220-228.
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- Kotenko, S.V., et al. 2000. JAK-Stat signal transduction pathway through the eyes of cytokine class II receptor complexes. *Oncogene* 19: 2557-2565.
- Sanceau, J., et al. 2000. IFN- β induces serine phosphorylation of Stat-1 in Ewing's sarcoma cells and mediates apoptosis via induction of IRF-1 and activation of caspase-7. *Oncogene* 19: 3372-3383.
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- Bianchi, M., et al. 2000. Inhibition of IL-2-induced JAK/Stat signaling by glucocorticoids. *Proc. Natl. Acad. Sci. USA* 97: 9573-9578.

CHROMOSOMAL LOCATION

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

SOURCE

Tyk 2 (H-4) is a mouse monoclonal antibody raised against amino acids 120-255 mapping near the N-terminus of Tyk 2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Tyk 2 (H-4) is recommended for detection of Tyk 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

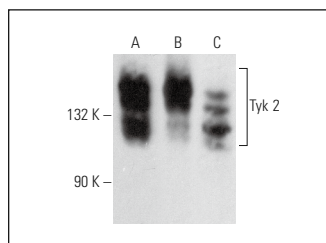
Molecular Weight of Tyk 2: 115/130 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, RBL-1 whole cell lysate: sc-364790 or M1 whole cell lysate: sc-364782.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Tyk 2 (H-4): sc-166686. Western blot analysis of Tyk 2 expression in M1 (A), RAW 264.7 (B) and RBL-1 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Fuchs, S., et al. 2016. Tyrosine kinase 2 is not limiting human antiviral type III interferon responses. *Eur. J. Immunol.* 46: 2639-2649.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.