

Tollip (h): 293 Lysate: sc-112320

BACKGROUND

Tollip (toll-interacting protein) serves as a suppressor of innate immunity signaling and links the serine/threonine kinase IRAK to the IL-1 receptor complex upon receptor activation. Overexpression of Tollip in HEK293 cells inhibits NF κ B activation in response to TLR2 and TLR4 signaling. Negative regulation of TLR signaling by Tollip may limit the production of proinflammatory mediators during inflammation and infection. Tollip forms a complex with Tom1 to regulate endosomal trafficking of ubiquitinated proteins. The Tollip protein shows ubiquitous expression in mouse.

REFERENCES

1. Burns, K., Clatworthy, J., Martin, L., Martinon, F., Plumpton, C., Maschera, B., Lewis, A., Ray, K., Tschopp, J. and Volpe, F. 2000. Tollip, a new component of the IL-1RI pathway, links IRAK to the IL-1 receptor. *Nat. Cell Biol.* 2: 346-351.
2. Bulut, Y., Faure, E., Thomas, L., Equils, O. and Arditi, M. 2001. Cooperation of toll-like receptor 2 and 6 for cellular activation by soluble tuberculosis factor and *Borrelia burgdorferi* outer surface protein A lipoprotein: role of toll-interacting protein and IL-1 receptor signaling molecules in toll-like receptor 2 signaling. *J. Immunol.* 167: 987-994.
3. Zhang, G. and Ghosh, S. 2002. Negative regulation of toll-like receptor-mediated signaling by Tollip. *J. Biol. Chem.* 277: 7059-7065.
4. Katoh, Y., Shiba, Y., Mitsuhashi, H., Yanagida, Y., Takatsu, H. and Nakayama, K. 2004. Tollip and Tom1 form a complex and recruit ubiquitin-conjugated proteins onto early endosomes. *J. Biol. Chem.* 279: 24435-24443.
5. Li, T., Hu, J. and Li, L. 2004. Characterization of Tollip protein upon lipopolysaccharide challenge. *Mol. Immunol.* 41: 85-92.
6. Ohnuma, K., Yamochi, T., Uchiyama, M., Nishibashi, K., Iwata, S., Hosono, O., Kawasaki, H., Tanaka, H., Dang, N.H. and Morimoto, C. 2005. CD26 mediates dissociation of Tollip and IRAK-1 from caveolin-1 and induces upregulation of CD86 on antigen-presenting cells. *Mol. Cell. Biol.* 25: 7743-7757.
7. Katoh, Y., Imakagura, H., Futatsumori, M. and Nakayama, K. 2006. Recruitment of Clathrin onto endosomes by the Tom1-Tollip complex. *Biochem. Biophys. Res. Commun.* 341: 143-149.
8. Didierlaurent, A., Brissoni, B., Velin, D., Aebi, N., Tardivel, A., Kaslin, E., Sirard, J.C., Angelov, G., Tschopp, J. and Burns, K. 2006. Tollip regulates proinflammatory responses to interleukin-1 and lipopolysaccharide. *Mol. Cell. Biol.* 26: 735-742.
9. Schimming, T.T., Parwez, Q., Petrasch-Parwez, E., Nothnagel, M., Epplen, J.T. and Hoffjan, S. 2007. Association of toll-interacting protein gene polymorphisms with atopic dermatitis. *BMC Dermatol.* 7: 3.

CHROMOSOMAL LOCATION

Genetic locus: TOLLIP (human) mapping to 11p15.5.

PRODUCT

Tollip (h): 293 Lysate represents a lysate of human Tollip transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

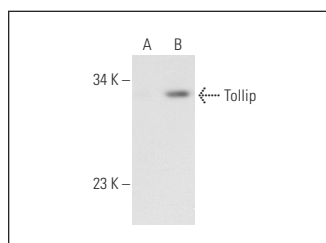
APPLICATIONS

Tollip (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive Tollip antibodies. Recommended use: 10-20 μ l per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

Tollip (Kimmy-2): sc-59720 is recommended as a positive control antibody for Western Blot analysis of enhanced human Tollip expression in Tollip transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



Tollip (Kimmy-2): sc-59720. Western blot analysis of Tollip expression in non-transfected: sc-110760 (A) and human Tollip transfected: sc-112320 (B) 293 whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.