

IL-23 (H-113): sc-50303

BACKGROUND

The p19 protein shares sequence similarity with IL-6 subfamily members and is distantly related to the p35 subunit of IL-12. p19 shows no biological activity by itself; instead, it combines with the p40 subunit of IL-12 to form a biologically active, composite cytokine, IL-23. IL-23 shares some *in vivo* functions with IL-12, including the activation of the transcription factor Stat4. Indeed, the receptors for each appear to share one subunit, but also have at least one distinct subunit. Activated dendritic cells secrete detectable levels of this heterodimeric complex and IL-23 binds to IL-12R β 1 but fails to engage IL-12R β 2. Similar to IL-12, human IL-23 stimulates IFN- γ production and proliferation in PHA blast T cells, as well as in CD45RO (memory) T cells. Ubiquitous transgenic expression of the IL-23 subunit p19 induces multi-organ inflammation, runting, infertility and premature death. The gene which encodes IL-23 maps to human chromosome 12.

REFERENCES

1. Oppmann, B., et al. 2000. Novel p19 protein engages IL-12p40 to form a cytokine, IL-23, with biological activities similar as well as distinct from IL-12. *Immunity* 13: 715-725.
2. Wiekowski, M.T., et al. 2001. Ubiquitous transgenic expression of the IL-23 subunit p19 induces multiorgan inflammation, runting, infertility and premature death. *J. Immunol.* 166: 7563-7570.
3. Frucht, D.M. 2002. IL-23: a cytokine that acts on memory T cells. *Sci. STKE* 2002: PE1.
4. Cooper, A.M., et al. 2002. Mice lacking bioactive IL-12 can generate protective, antigen-specific cellular responses to mycobacterial infection only if the IL-12 p40 subunit is present. *J. Immunol.* 168: 1322-1327.
5. Watford, W.T., et al. 2004. Signaling by IL-12 and IL-23 and the immunoregulatory roles of Stat4. *Immunol. Rev.* 202: 139-156.
6. Vanden Eijnden, S., et al. 2005. IL-23 upregulates IL-10 and induces IL-17 synthesis by polyclonally activated naive T cells in human. *Eur. J. Immunol.* 35: 469-475.
7. Zhang, X.Y., et al. 2006. Identification and expression analysis of alternatively spliced isoforms of human interleukin-23 receptor gene in normal lymphoid cells and selected tumor cells. *Immunogenetics* 57: 934-943.

CHROMOSOMAL LOCATION

Genetic locus: IL23A (human) mapping to 12q13.3; IL23a (mouse) mapping to 10 D3.

SOURCE

IL-23 (H-113) is a rabbit polyclonal antibody raised against amino acids 75-187 mapping near the C-terminus of IL-23 of human origin.

PRODUCT

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

APPLICATIONS

IL-23 (H-113) is recommended for detection of IL-23 α subunit p19 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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).

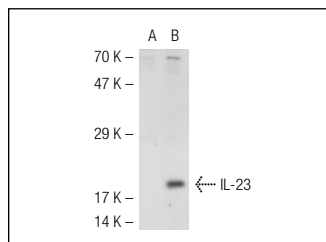
IL-23 (H-113) is also recommended for detection of IL-23 α subunit p19 in additional species, including equine, canine, bovine, porcine and feline.

Suitable for use as control antibody for IL-23 siRNA (h): sc-43860, IL-23 siRNA (m): sc-60028, IL-23 shRNA Plasmid (h): sc-43860-SH, IL-23 shRNA Plasmid (m): sc-60028-SH, IL-23 shRNA (h) Lentiviral Particles: sc-43860-V and IL-23 shRNA (m) Lentiviral Particles: sc-60028-V.

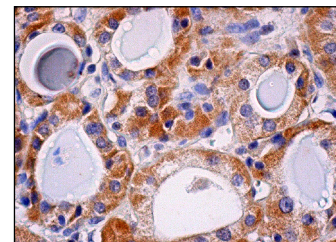
Molecular Weight of IL-23 p19 subunit: 19 kDa.

Positive Controls: IL-23 (m): 293T Lysate: sc-121044.

DATA



IL-23 (H-113): sc-50303. Western blot analysis of IL-23 expression in non-transfected: sc-117752 (A) and mouse IL-23 transfected: sc-121044 (B) 293T whole cell lysates.



IL-23 (H-113): sc-50303. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Shamji, M.F., et al. 2009. Gait abnormalities and inflammatory cytokines in an autologous nucleus pulposus model of radiculopathy. *Spine* 34: 648-654.

STORAGE

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

RESEARCH USE

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



Try **IL-23 (C-3): sc-271279** or **IL-23 (G-6): sc-271280**, our highly recommended monoclonal alternatives to IL-23 (H-113).