

## IL-9 (M-19): sc-1272

### BACKGROUND

Interleukin-9, or IL-9, is a Th2 cytokine that has been shown to promote the antigen-independent growth of some T helper clones. IL-9 is a pleiotropic cytokine with multiple functions on cells of lymphoid, myeloid and mast cell lineages. Both mouse and human cDNAs encode 144 amino acid precursors with 18 amino acid residue signal peptides that are cleaved to form the mature biologically-active glycoprotein. Although IL-9 is constitutively expressed *in vitro* by several transformed T cell lines, IL-9 expression can be induced in human peripheral blood T lymphocytes by T cell activators such as phorbol esters (PHA) and anti-CD3 antibodies. IL-9 exerts its biological effects through the interleukin-9 receptor, IL-9R. IL-9R is composed of at least two subunits: the IL-2 receptor  $\gamma$  chain, which is common to the IL-2, IL-4, IL-7 and IL-15 receptors, and one specific to the IL-9 receptor.

### REFERENCES

1. Van Snick, J., et al. 1989. Cloning and characterization of a cDNA for a new mouse T cell growth factor (P40). *J. Exp. Med.* 169: 363-368.
2. Renauld, J.C., et al. 1990. Cloning and expression of a cDNA for the human homolog of mouse T cell and mast cell growth factor P40. *Cytokine* 2: 9-12.
3. Gessner, A., et al. 1993. Differential regulation of IL-9-expression after infection with *Leishmania major* in susceptible and resistant mice. *Immunobiology* 189: 419-435.
4. Houssiau, F.A., et al. 1995. A cascade of cytokines is responsible for IL-9 expression in human T cells. Involvement of IL-2, IL-4 and IL-10. *J. Immunol.* 154: 2624-2630.
5. Louahed, J., et al. 1995. IL-9 induces expression of granzymes and high-affinity IgE receptor in murine T helper clones. *J. Immunol.* 154: 5061-5070.
6. Kimura, Y., et al. 1995. Sharing of the IL-2 receptor  $\gamma$  chain with the functional IL-9 receptor complex. *Int. Immunol.* 7: 115-120.
7. Tsicopoulos, A., et al. 2004. Involvement of IL-9 in the bronchial phenotype of patients with nasal polyposis. *J. Allergy Clin. Immunol.* 113: 462-469.

### CHROMOSOMAL LOCATION

Genetic locus: IL9 (human) mapping to 5q32; IL9 (mouse) mapping to 13 B1.

### SOURCE

IL-9 (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IL-9 of mouse origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-1272 P, (100  $\mu$ g 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.

### APPLICATIONS

IL-9 (M-19) is recommended for detection of IL-9 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 IL-9 siRNA (h): sc-39632, IL-9 siRNA (m): sc-39633, IL-9 shRNA Plasmid (h): sc-39632-SH, IL-9 shRNA Plasmid (m): sc-39633-SH, IL-9 shRNA (h) Lentiviral Particles: sc-39632-V and IL-9 shRNA (m) Lentiviral Particles: sc-39633-V.

Molecular Weight (predicted) of IL-9: 14 kDa.

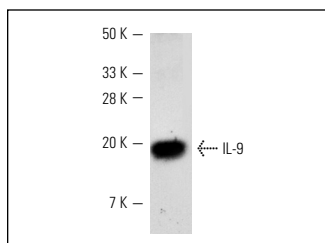
Molecular Weight (observed) of IL-9: 40 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### DATA



IL-9 (M-19): sc-1272. Western blot analysis of mouse recombinant IL-9.

### RESEARCH USE

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

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Try **IL-9 (H-7): sc-46654**, our highly recommended monoclonal alternative to IL-9 (M-19).