

IL-9

Interleukin 9, T-cell growth factor P40 human, recombinant, *E. coli*

Cat. No.	Amount
PR-469	10 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized.

Solubility

It is recommended to reconstitute the lyophilized IL-9 in bidest H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Activity

ED₅₀: < 0.2 ng/ml, corresponding to a specific activity 5 x 10⁶ IU/mg, determined by the dosedependent stimulation of human MO7e cells.

Endotoxin

Less than 0.1 ng/µg (IEU/µg) of IL-9.

Molecular Weight

14 kDa

Purity

≥ 98.5% by SDS-PAGE and RP-HPLC

Description

Interleukin-9 (IL-9) has been strongly implicated in the pathogenesis of asthma, including the overproduction of mucus, in humans and in animal models.

IL-9 is known to regulate many cell types involved in T-helper type 2 responses classically associated with asthma, including B- and T-lymphocytes, mast cells, eosinophils and epithelial cells.

Recombinant human IL-9 produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 127 amino acids and having a molecular mass of 14 kDa. IL-9 is purified by proprietary chromatographic techniques.

Selected References:

- Pilette *et al.* (2002) Oxidative burst in lipopolysaccharide-activated human alveolar macrophages is inhibited by interleukin-9. *Eur. Respir. J.* **20**:1198.
- Reader *et al.* (2003) Interleukin-9 induces mucous cell metaplasia independent of inflammation. *Am. J. Respir. Cell. Mol. Biol.* **28**:664.
- Yang *et al.* (2004) Epstein-Barr virus (EBV)-encoded RNA promotes growth of EBV-infected T cells through interleukin-9 induction. *Cancer Res.* **64**:5332.
- McNamara *et al.* (2004) Interleukin 9 production in the lungs of infants with severe respiratory syncytial virus bronchiolitis. *Lancet.* **363**:1031.
- Hoebee *et al.* (2004) Influence of promoter variants of interleukin-10, interleukin-9, and tumor necrosis factor-alpha genes on respiratory syncytial virus bronchiolitis. *J. Infect. Dis.* **189**:239.
- Panzner *et al.* (2003) Marked up-regulation of T lymphocytes and expression of interleukin-9 in bronchial biopsies from patients With chronic bronchitis with obstruction. *Chest.* **124**:1909.
- Nishimura *et al.* (2004) Elevated interleukin-9 receptor expression and response to interleukins-9 and -7 in thymocytes during radiationinduced T-cell lymphomagenesis in B6C3F1 mice. *J. Cell. Physiol.* **198**:82.
- Fischer *et al.* (2003) Increased serum levels of interleukin-9 correlate to negative prognostic factors in Hodgkin's lymphoma. *Leukemia.* **17**:2513.