

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat IL-9 R in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 40% cross-reactivity with recombinant mouse IL-9 R is observed and approximately 10% cross-reactivity with recombinant human IL-9&
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat IL-9 R Val38-Ala270 Accession # EDM04022
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

The IL-9 receptor alpha protein is a member of the type I cytokine receptor family. It is a 62 kDa IL-9 receptor subunit (previously Gfi-2, designated CD129) that binds IL-9 and pairs with the 64 kDa cytokine receptor common γ-chain to allow cell signaling (1-3). The 467 amino acid (aa) rat IL-9 Rα precursor is predicted to contain a 37 aa signal sequence, a 232 aa extracellular domain (ECD) with four conserved cysteine residues in its N-terminal region, a fibronectin type III domain and a WSXWS motif, a 21 aa transmembrane (TM) domain, and a 177 aa cytoplasmic domain with a Box 1 JAK-binding motif (1, 2, 4). A potential isoform contains a 36 aa sequence that is substituted for the TM and cytoplasmic domains (5). The ECD of rat IL-9 Rα shares 86%, 63%, 66%, 63% and 59% aa identity with the ECD of mouse, human, equine, canine and bovine IL-9 Rα, respectively. Mast cells, germinal center and B-1b B cells, T cell blasts, and myeloid progenitors express IL-9 R (1, 6-8). The primary functions of IL-9 have been difficult to determine due to the cross-functionality and cross-induction of cytokines. IL-9 production by regulatory T cells (T-regs), however, is crucial for mast cell recruitment and differentiation, which in turn is crucial for tolerance of allografts (7). Genetic deletion and transgenic expression of IL-9 and other cytokines has also demonstrated the role of IL-9 in mastocytosis, eosinophilia and B cell infiltration of the lung in a mouse asthma-like model, while IL-9 induction of IL-13 is responsible for eosinophil recruitment and mucous upregulation (8-10).

PRODUCT SPECIFIC NOTICES

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