Rat IL-3 Alexa Fluor® 750-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2524S
100 µg

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat IL-3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 5% cross-reactivity with recombinant mouse IL-3 and less than 1% cross-reactivity with recombinant human IL-3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant rat IL-3 Ile27-Cys169 Accession # P97688
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 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.*

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

Rat interleukin-3 (IL-3; also multi-CSF) is a 26 kDa, variably glycosylated monomeric polypeptide that belongs to the α-helix family of hematopoietic cytokines (1, 2). IL-3 has pleiotrophic activies on a number of hematopoietic-related cells (1, 3). The rat molecule has two alternate splice forms. The first is termed IL-3β and is synthesized as a 169 amino acid (aa) precursor that contains a 27 aa signal sequence and a 142 aa mature segment (1, 2). The second is called IL-3α, and is identical to IL-3β, save for a three amino acid (Tyr-Pro-Gln) deletion at positions 56-58 (1). The beta form is considered the most common form. Each form has an α-helical structure with two intrachain disulfide bonds and two potential N-linked glycosylation sites. Rat IL-3 is generally considered to be species-specific in its activity. In the mature region, rat IL-3 shares 55%, 30%, and 24% aa sequence identity with mouse, human, and bovine IL-3, respectively. Cells known to express IL-3 include connective tissue mast cells, astrocytes, microglia, megakaryocytes, eosinophils, T cells, keratinocytes and thymic epithelium.

IL-3 exerts its biological activities by binding to a 70 kDa, low affinity, ligand-binding IL-3 Rα subunit, (6) which then recruits a 120 kDa, common β-chain, signal transducing subunit (7) to form a functional IL-3 receptor (1, 6, 7). Receptors for IL-3 are present on bone marrow progenitors, macrophages, mast cells, eosinophils, megakaryocytes, basophils, and various myeloid leukemic cells. IL-3 can stimulate the proliferation and differentiation of pluripotent hematopoietic stem cells as well as various lineage committed progenitors including those for neutrophils, macrophages, magakaryocytes, and erythroid cells. IL-3 can stimulate the growth of early B cells and mature macrophages, mast cells, eosinophils, basophils, and megakaryocytes. IL-3 augments the function activity of basophils, mast cells, eosinophils, and macrophages (1, 8). In combination with other molecules such as CD40L and or IL-4, IL-3 can stimulate production of dendritic cells (1, 2, 9, 10).

PRODUCT SPECIFIC NOTICES

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