

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse PILR-β in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 20% cross-reactivity with recombinant mouse PILR-α is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse PILR-β Ala28-Gly193 Accession # Q2YFS2
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.

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

PILR-β (paired immunoglobulin-like type 2 receptor-beta) is one of two members of a small family of immunoregulatory Ig-superfamily receptors (1, 2). It is a counterpart to PILR-α and it likely arose through PILR-α gene duplication and rearrangement (1). The PILRs represent one of many pairs of Ig-like domain-containing receptors that participate in immune regulation. PILR-β and -α should not be confused with the similarly named PIRs (also paired immunoglobulin-like receptors), or the functionally-related SIRP and ILT/LILR/CD85/LIR family of receptors (2). While PIRs, ILTs and SIRPs contain three to six Ig-like domains in their extracellular region, PILR-β and -α show only one Ig-like region in their extracellular domain (ECD) (1, 2). Mouse PILR-β is a 196 amino acid (aa) type I transmembrane (TM) protein (3). It contains a 167 aa ECD, a 21 aa TM segment, and a short 8 aa cytoplasmic region. The ECD shows a V-type Ig-like domain (aa 39-135), while the TM segment contains a positively-charged Lys at position # 202. This Lys is known to interact with the transmembrane signaling adaptor protein DAP12, making PILR-β an activating receptor. Activation of PILR-β through CD99 ligation induces NK cell cytotoxicity and dendritic cell secretion of NO and TNF-α (3). Mouse PILR-β is found on NK cells, neutrophils, macrophages, and monocyte-derived dendritic cells (3). Mouse PILR-β ECD is 44% and 75% aa identical to human and rat PILR-β ECD, respectively; it is 75% aa identical to the ECD of mouse PILR-α (3). Evidence suggests that mouse PILR-β will not be active in a human system (3). Potential isoforms of PILR-β have been reported. One shows an alternate start site at Met14, a second shows a 21 aa substitution for the C-terminal 67 aa, and a third exhibits multiple polymorphisms for an overall aa identity of 86% (4, 5, 6).

PRODUCT SPECIFIC NOTICES

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