

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human PILR- $\alpha$ in direct ELISAs.
<b>Source</b>	Recombinant Monoclonal Rabbit IgG Clone # 2175D
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human PILR- $\alpha$ with a C-terminal 6-His tag Gln20-Thr196 Accession # Q9UKJ1
<b>Conjugate</b>	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.

	Recommended Concentration	Sample
<b>Flow Cytometry</b>	0.25-1 $\mu$ g/10 <sup>6</sup> cells	HEK293 Human Cell Line Transfected with Human PILR-alpha and eGFP

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## BACKGROUND

Paired immunoglobulin-like type 2 receptor alpha (PILRa; also inhibitory receptor PILR-alpha) are 44-50 kDa paired receptors that consist of highly related activating and inhibitory receptors, and are widely involved in the regulation of the immune system. PILR- $\alpha$  is thought to act as a cellular signaling inhibitory receptor by recruiting cytoplasmic phosphatases like PTPN6/SHP-1 and PTPN11/SHP-2 via their SH2 domains that block signal transduction through dephosphorylation of signaling molecules. Human PILR- $\alpha$  is synthesized as a 303 amino acid (aa) precursor that contains a 19 aa signal sequence, a 178 aa extracellular domain (ECD), a 21 aa transmembrane segment, and an 85 aa cytoplasmic domain. The ECD contains one Ig-like V-type domain and one potential site for N-linked glycosylation. The cytoplasmic domain contains two ITIM motifs (aa 267-272 and 296-301). Alternate splicing generates multiple shorter isoforms. One is TM and possesses a 35 aa substitution for aa 264-303, while others are soluble, and show a deletion of aa 152-224 that may be coupled to the 35 aa substitution noted above, or simply exhibit a 24 aa substitution for aa 152-303. Mature human PILR- $\alpha$  is 45% aa identical to mature mouse PILR- $\alpha$ . PILR- $\alpha$  is predominantly detected in hemopoietic tissues and is expressed in monocytes, macrophages, and granulocytes, but not lymphocytes. It is also strongly expressed by dendritic cells. PILR- $\alpha$  interacts with herpes simplex 1 glycoprotein B and functions as an entry coreceptor for this virus.

## PRODUCT SPECIFIC NOTICES

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