Recombinant Human PILR-β Fc Chimera

Catalog Number: 9828-PR

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived

Human PILR-β (Gln20-Ala189) Accession # Q9UKJ0-1	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis: No results obtained. Gln20 predicted.

Structure / Form: Disulfide-linked homodimer

Predicted Molecular Mass: 45.7 kDa (monomer)

SPECIFICATIONS

SDS-PAGE: 57-66 kDa, reducing conditions

Activity: Measured by its binding ability in a functional ELISA.
Recombinant Human CL-P1/COLEC12 (Catalog # 2690-CL) immobilized at 2 µg/mL, 100 µg/mL, can bind to Recombinant Human PILR-β Fc Chimera with an ED_{50} of 0.12-0.72 µg/mL.

Endotoxin Level: <0.10 EU per 1 µg of the protein by the LAL method.

Purity: >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution: Reconstitute at 500 µg/mL in PBS.

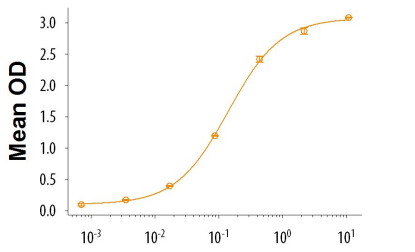
Shipping: The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage: **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



When Recombinant Human CL-P1/COLEC12 (Catalog # 2690-CL) is coated at 2 µg/mL, Recombinant Human PILR-beta Fc Chimera (Catalog # 9828-PR) binds with an ED_{50} of 0.12-0.72 µg/mL.

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BACKGROUND

Paired immunoglobulin-like type 2 receptor beta (PILR-β) is a type I transmembrane (TM) glycoprotein belonging to the Ig superfamily. PILR-β is the activating counterpart to the immunoreceptor tyrosine-based inhibitory motif (ITIM) containing PILR-α inhibitory receptor (1). Mature human PILR-β is a 208 amino acid (aa) protein containing a 172 aa V-type Ig-like extracellular domain (ECD) with a siglec-like fold, a single TM, and a truncated cytoplasmic tail (2, 3). The TM of PILR-β contains a positively-charged residue which interacts with immunoreceptor tyrosine-based activation (ITAM)-bearing adaptor molecules (2). The ECD of mature human PILR-β shares 40% aa sequence identity with its mouse counterpart. PILR-β is expressed on myeloid cells, such as natural killer, macrophage, and dendritic cells, as well as resident cells of the central nervous system, such as microglial cells (2,4). It is a binding partner for DAP12 and CD99, and has been shown to play an important role in innate immunity and inflammation (4-6). The PILR-α/β pair have also been shown to regulate cell signaling via association with SHP-1 (7). Experiments studying the effects of *S. aureus* and *T. gondii* infections in mice have shown that up-regulation of PILR-β led to significantly lower survival rates while knock-down of PILR-β or activation of PILR-α resulted in significantly less inflammation and increased pathogen clearance (4,5).

References:

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7. Mousseau, DD. *et al.* (2000) J. Biol. Chem. **275**:4467.

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