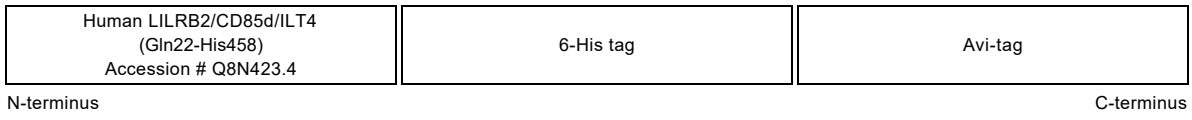
Biotinylated Recombinant Human LILRB2/CD85d/ILT4 His-tag Avi-tag

Catalog Number: AVI8429

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human LILRB2/CD85d/ILT4 protein



N-terminal Sequence Analysis	Gln22 inferred from enzymatic pyroglutamate treatment revealing Thr23
Structure / Form	Biotinylated via Avi-tag
Predicted Molecular Mass	50 kDa

SPECIFICATIONS

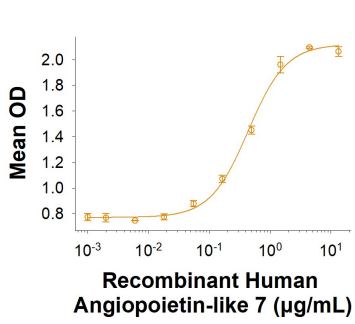
SDS-PAGE	65-75 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Biotinylated Recombinant Human LILRB2/CD85d/ILT4 His-tag Avi-tag (Catalog # AVI8429) is captured on EvenCoat Streptavidin Coated Plates (Catalog # CP004) at 2 µg/mL (100 µL/well), the concentration of Recombinant Human Angiopoietin-like 7 Protein (Catalog # 914-AN) that produces 50% of the binding response is 0.100-0.800 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.

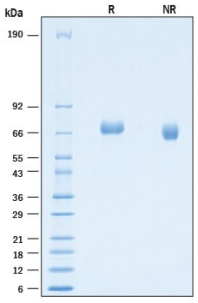
DATA

Binding Activity



Biotinylated Recombinant Human LILRB2/CD85d/ILT4 His-tag Avi-tag Protein Binding Activity. When Biotinylated Recombinant Human LILRB2/CD85d/ILT4 His-tag Avi-tag (Catalog # AVI8429) is captured on EvenCoat Streptavidin Coated Plates (Catalog # CP004) at 2 µg/mL (100 µL/well), the concentration of Recombinant Human Angiopoietin-like 7 Protein (Catalog # 914-AN) that produces 50% of the optimal binding response is 0.100-0.800 µg/mL.

SDS-PAGE



Biotinylated Recombinant Human LILRB2/CD85d/ILT4 His-tag Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human LILRB2/CD85d/ILT4 His-tag Avi-tag Protein (Catalog # AVI8429) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 65-75 kDa.

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Biotinylated Recombinant Human LILRB2/CD85d/ILT4 His-tag Avi-tag

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BACKGROUND

Immunoglobulin-like transcript 4 (ILT4), also known as Leukocyte immunoglobulin-like receptor subfamily B member 2 (LILRB2) and LIR2, is a member of a family of activating and inhibitory type immunoreceptors mainly expressed in myeloid cells. The LILRB family contains five members, LILRB1–5, with a varying number of Ig-like domains in their extracellular domains (ECD) that play roles in human immunity and are considered immune checkpoint factors (1). Mature human ILT4 consists of an ECD with 4 Ig-like domains, a transmembrane segment, and a cytoplasmic domain with 3 inhibitory immunoreceptor tyrosine-based inhibitory motifs (ITIMs). The ECD of human ILT4 shares 76% amino acid sequence identity with chimpanzee ILT4. While relatives of ILT4s exist in birds and mammals, ILT4 homologs are not found in lower organisms (2). ILT4 is primarily expressed by monocytes, macrophages, and dendritic cells and binds to classical MHC I proteins as well as the non-classical HLA-G1 and HLA-F molecules (3,4). ILT4 appears to modulate immune responses during mid- and late-activation phases of the neutrophil lifecycle. ILT4 activation promotes the development of tolerogenic dendritic cells and the subsequent induction of regulatory T cells and CD4+ T cell anergy (5). ILT4 is also highly expressed in various solid tumors and is a potent driver for tumor growth, invasion and metastasis, and blocking ILT4 in tumor cells might be an effective strategy for cancer therapy (6). Our Avi-tag Biotinylated ILT4 features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

References:

1. Kang, X. *et al.* (2016) Cell cycle **15**:25.
2. Dennis, G. *et al.* (2000) Proc. Natl. Acad. Sci. U.S.A. **97**:13245.
3. Baudhuin, J. *et al.* (2013) Proc. Natl. Acad. Sci. U.S.A. **110**:17957.
4. Shiroishi, M. *et al.* (2003) Proc. Natl. Acad. Sci. U.S.A. **100**:8856.
5. Wu, J. and Horuzsko, A. (2009) Human immunology **70**:353.
6. Chen, H.M. *et al.* (2018) J. Clin. Invest. **128**:5647.

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