Recombinant Human Angiopoietin-like Protein 5/ANGPTL5

Catalog Number: 6675-AN/CF

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human Angiopoietin-like Protein 5/ANGPTL5 protein Met1-Lys388 with a C-terminal 6-His tag Accession # AAH49170
N-terminal Sequence Analysis	Val23 & Asn26
Predicted Molecular Mass	42.3 kDa

SPECIFICATIONS

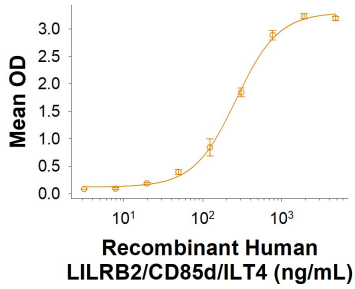
SDS-PAGE	50-60 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Angiopoietin-like Protein 5/ANGPTL5 (Catalog # 6675-AN/CF) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human LILRB2/CD85d/ILT4 Fc Chimera (Catalog # 2078-T4) binds with an ED_{50} of 80.0-800 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Supplied as a 0.2 µm filtered solution in PBS and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	
Shipping	The product is shipped with dry ice or equivalent. 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



Recombinant Human Angiopoietin-like Protein 5/ANGPTL5 Binding Activity. When Recombinant Human Angiopoietin-like Protein 5/ANGPTL5 (Catalog # 6675-AN/CF) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human LILRB2/CD85d/ILT4 Fc Chimera (Catalog # 2078-T4) binds with an ED_{50} of 80.0-800 ng/mL.

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BACKGROUND

Angiopoietin-like 5 (ANGPTL5) is a secreted glycoprotein that is structurally related to the angiopoietins which contain an N-terminal coiled-coil domain and a C-terminal fibrinogen-like domain (1-3). It shares 88% and 93% aa sequence identity with bovine and porcine ANGPTL5, and greater than 98% identity with chimpanzee, orangutan, and rhesus ANGPTL5. ANGPTL5 is expressed in adipose, bronchial, epididymal, and heart tissue (3, 4). Rare polymorphisms and loss of function mutations in human ANGPTL5 are associated with low circulating triglyceride levels and alterations in body mass index (4, 5). ANGPTL5, when used in combination with other growth factors such as SCF, Thrombopoietin, IGF-II, FGF acidic, Flt-3 Ligand, and IGFBP-2, enhances the expansion and engraftment of human and mouse hematopoietic stem cells (6-8). The coiled-coil domain of ANGPTL proteins is critical for this effect. However, the molecular mechanism of ANGPTL proteins in stem cell activity remains unclear (6).

References:

1. Oike, Y. *et al.* (2009) Circ. J. **73**:2192.
2. Miida, T. and S. Hirayama (2010) Curr. Opin. Lipidol. **21**:70.
3. Zeng, L. *et al.* (2003) J. Hum. Genet. **48**:159.
4. Romeo, S. *et al.* (2009) J. Clin. Invest. **119**:70.
5. Liu, D.J. and S.M. Leal (2010) PloS Genet. **6**:e1001156.
6. Zhang, C.C. *et al.* (2006) Nat. Med. **12**:240.
7. Zhang, C.C. *et al.* (2008) Blood **111**:3415.
8. Khoury, M. *et al.* (2010) Stem Cells Dev. Dec 8 epub.

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