

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived
Gln27-Pro346, with a C-terminal 10-His tag
Accession # O43827

N-terminal Sequence Analysis No results: Gln27 predicted, sequencing might be blocked

Structure / Form Oligomer, Biotinylated on protein carbohydrates

Predicted Molecular Mass 39 kDa (unlabeled)

SPECIFICATIONS

SDS-PAGE >110 kDa, reducing conditions

Activity Measured by its ability to promote the expansion of E16 rat liver mononuclear cells *in vitro*, in the presence of Recombinant Mouse SCF/c-kit Ligand (Catalog # 455-MC), Recombinant Mouse Thrombopoietin/Tpo (Catalog # 488-TO), and Recombinant Mouse Flt-3 Ligand (Catalog # 427-FL).
The ED₅₀ for this effect is 50-200 ng/mL in the presence of a cross-linking antibody, Mouse Anti-polyHistidine Monoclonal Antibody (Catalog # MAB050).

Endotoxin Level <1.0 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE with silver staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in PBS.

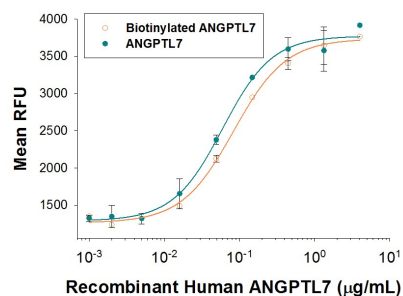
Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

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



Both Biotinylated rhANGPTL7 (Catalog # BT914) and unlabeled Recombinant Human Angiopoietin-like Protein 7/ANGPTL7 (Catalog # 914-AN) stimulate the expansion of E16-E18 rat liver mononuclear cells *in vitro*, in the presence of Recombinant Mouse SCF/c-kit Ligand (Catalog # 455-MC), Recombinant Mouse Thrombopoietin/Tpo (Catalog # 488-TO), and Recombinant Mouse Flt-3 Ligand (Catalog # 427-FL). The ED₅₀ for this effect is 50-200 ng/mL in the presence of a cross-linking antibody, His Tag MAb (Catalog # MAB050). The similarity in activity highlights that the biotinylated protein is fully functional.

BACKGROUND

Angiopoietin-like 7 (ANGPTL7), also known as Corneal-Derived Transcript 6 (CDT6), is a secreted glycoprotein that is structurally related to the angiopoietins. Members of this protein family contain an N-terminal coiled coil domain and a C-terminal fibrinogen-like domain (1-3). ANGPTL7 shares 89% aa sequence identity with mouse and rat ANGPTL7. It is secreted as a 45-50 kDa monomer that forms disulfide-linked homotrimers and tetramers *via* the coiled coil domain (4, 5). ANGPTL7 is expressed in the corneal stroma, trabecular meshwork, and sclera and is elevated in glaucoma aqueous humor (3, 5). Its production is up-regulated in trabecular meshwork cells by glucocorticoids and TGF- β and in cartilage by TNF- α (5-7). Over-expression of ANGPTL7 in trabecular meshwork cells inhibits the production of collagen and proteoglycans (8). When over-expressed in tumor cells it promotes collagen and proteoglycan deposition but inhibits tumor xenograft progression and tumor angiogenesis (4). ANGPTL7, when used in combination with SCF, Thrombopoietin, IGF-II, and FGF acidic, enhances the expansion and engraftment of human and mouse hematopoietic stem cells (9).

References:

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