

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived
Met1-Pro346, with a C-terminal 10-His tag
Accession # O43827

N-terminal Sequence Analysis No results obtained: Gln27 predicted

Predicted Molecular Mass 38.6 kDa

SPECIFICATIONS

SDS-PAGE 49-55 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 under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS and NaCl with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 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.

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). Overexpression of ANGPTL7 in trabecular meshwork cells inhibits the production of collagen and proteoglycans (8). When overexpressed in tumor cells it promotes collagen and proteoglycan deposition but inhibits tumor xenograft progression and tumor angiogenesis (4). Recently, ANGPTL proteins, including ANGPTL-2, -3, -4, -5 and -7, are identified as growth factors in combination with SCF, Thrombopoietin, IGF-II and FGF acidic that enhance the expansion and engraftment of human and mouse hematopoietic stem cells (9).

References:

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