Data Sheet (Cat.No.TMPY-05435)

TargetMol

ANGPT1/Angiopoietin-1 Protein, Human, Recombinant (hFc)

General Information

Synonyms: angiopoietin 1;AGPT;AGP1;ANG1

Protein Construction: A DNA sequence encoding the human ANGPT1 (NP_001137.2) (Met1-Leu261 and Arg277-Phe498 linked by a polypeptide linker) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: His 16

Species: Human

Expression Host: HEK293 Cells

Accession: Q15389-1

Molecular Weight: 82 kDa (predicted)

QC Testing

Biological Activity: Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 85 % as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The angiopoietin (ANGPT)-TIE2/TEK signaling pathway is essential for blood and lymphatic vascular homeostasis. ANGPT1 is a potent TIE2 activator, whereas ANGPT2 functions as a context-dependent agonist/antagonist. In disease, ANGPT2-mediated inhibition of TIE2 in blood vessels is linked to vascular leak, inflammation, and metastasis. Primary congenital glaucoma (PCG) is a leading cause of blindness in children worldwide and is

caused by developmental defects in 2 aqueous humor outflow structures, Schlemm's canal (SC) and the trabecular meshwork. We previously identified loss-of-function mutations in the angiopoietin (ANGPT) receptor TEK in families with PCG and showed that ANGPT/TEK signaling is essential for SC development. A role for the major ANGPT ligands in the development of the aqueous outflow pathway. We determined that ANGPT1 is essential for SC development, and that Angpt1-knockout mice form a severely hypomorphic canal with elevated intraocular pressure. By linking ANGPT1 with PCG, these results highlight the importance of ANGPT/TEK signaling in glaucoma pathogenesis and identify a candidate target for therapeutic development.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481