

Synonym

ANGPT2,AGPT2,ANG2,Angiopoietin-2

Source

FITC-Labeled Human Angiopoietin-2 (275-496), His Tag(AN2-HF242) is expressed from human 293 cells (HEK293). It contains AA Lys 275 - Phe 496 (Accession # [AAI26201.1](#)).

Predicted N-terminus: His

Molecular Characterization

Poly-his ANGPT2(Lys 275 - Phe 496)
AAI26201.1

This protein carries a polyhistidine tag at the N-terminus

The protein has a calculated MW of 26.3 kDa. The protein migrates as 30-35 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Conjugate

FITC

Excitation source: 488 nm spectral line, argon-ion laser

Excitation Wavelength: 488 nm

Emission Wavelength: 535 nm

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with FITC using standard chemical labeling method. The residual FITC is removed by molecular sieve treatment during purification process.

Protein Ratio

The FITC to protein molar ratio is 3.0-5.0.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

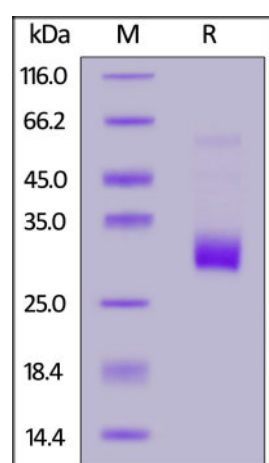
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please protect from light and avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

FITC-Labeled Human Angiopoietin-2 (275-496), His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Background

Angiopoietin-2 is also known as ANGPT2, AGPT2, ANG2, and is a secreted glycoprotein that plays a complex role in angiogenesis and inflammation. Ang2 is widely expressed during development, but it is restricted postnatally to highly angiogenic tissues such as the placenta, ovaries, and uterus. It is particularly abundant in vascular endothelial cells (EC) where it is stored in intracellular Weibel Palade bodies. Both Ang2 and the related Angiopoietin1 (Ang1) are ligands for the receptor tyrosine kinase Tie 2. Ang2 functions as a proangiogenic factor, although it can also induce EC death and vessel regression. Upon its release from quiescent EC, it regulates vascular remodeling by promoting EC survival, proliferation, and migration and destabilizing the interaction between EC and perivascular cells. Ang2 is required for postnatal vascular remodeling, and it cooperates with Ang1 during lymphatic vessel development. It mediates the upregulation of ICAM1 and VCAM1 on EC, which facilitates the adhesion of leukocytes during inflammation. Ang2 competitively inhibits Ang1-induced endothelial cell responses mediated by Tie2, and reduces vascular integrity. But the role of Ang2 is controversial since the opposite outcomes have been reported in other studies. Over-expression of Ang2 disrupts the vascular remodeling, induces endothelial cell apoptosis, and may play an important regulating role in tumor angiogenesis. Ang2 also promotes the neuronal differentiation and migration of subventricular zone progenitor cells.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.