Data Sheet (Cat.No.TMPY-05759)

TargetMol

Annexin V/ANXA5 Protein, Human, Recombinant, Biotinylated

General Information

Synonyms:	RPRGL3;ANX5;HEL-S-7;annexin A5;PP4;ENX2
Protein Construction:	A DNA sequence encoding the human ANXA5 (P08758) (Met1-Asp320) was expressed and purified. The purified protein was biotinylated in vitro. Predicted N terminal: Met 1
Species:	Human
Expression Host:	E. coli
Accession:	P08758
Molecular Weight:	35.9 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:	> 90 % as determined by SDS-PAGE.
Endotoxin:	Please contact us for more information.
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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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 placental anticoagulant protein Annexin A5 (ANXA5) is a multifunctional protein that is highly expressed on the apical surfaces of syncytiotrophoblasts, and plays an important role in haemostatic regulations, maintaining blood fluidity of the placenta. Annexin A5 (ANXA5) is a protein abundantly expressed in normal placenta where it contributes to the healthy outcome of a pregnancy. Lower ANXA5 levels have been observed in M2/ANXA5 haplotype carrying chorion. The association found between the maternal carriage of the M2/ANXA5 haplotype

and an elevated risk of IUGR and/or PE supports the hypothesis that carrier status of this haplotype and the consequently reduced placental ANXA5 expression might be responsible, at least partially, for the onset of these gestational vascular complications. ANXA5 could be used as a biomarker for the early detection of PE and for the prediction of its severity. ANXA5 as an embryonic anticoagulant that appears deficient in contiguous specter of thrombophilia-related pregnancy complications culminating more frequently in miscarriage in a maternal M2 carrier background. As a potential indicator for malignancy and lymphatic metastasis, ANXA5 overexpression increases in vitro migration and invasion of Hca-P cell, promotes in vivo malignancy, LNM rate and level of Hca-P-transplanted mice. Hereditary thrombophilias can impair vascular placental functions and predispose to the birth of small-for-gestational age (SGA) babies. The placental anticoagulant protein annexin A5 (ANXA5) may contribute to this process. A functional haplotype (M2) within the ANXA5 gene is associated with fetal loss and venous thrombosis.

Reference

Cederholm A, et al. (2007) Annexin A5 as a novel player in prevention of atherothrombosis in SLE and in the general population. Ann N Y Acad Sci. 1108: 96-103.

Schlaepfer DD, et al. (1992) Inhibition of Protein Kinase C by Annexin V . Biochemistry. 31: 1886-91.

Vermes I, et al. (1995) A novel assay for apoptosis-flow cytometric detection of phosphatidylserine expression on early apoptotic cells using fluorescein labelled Annexin V . J Immunol Methods. 184 (1): 39-51.

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