Annexin A2 Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: Annexin II, Annexin-2, Calpactin I heavy chain, Calpactin-1 heavy chain, Chromobindin-8, Lipocortin II, Placental anticoagulant protein IV, PAP-IV, Protein I, p36, ANX2, ANX2L4, CAL1H, LPC2D

Cat. No.:
RD172348100 (0.1 mg)

Description

Total 347 AA. MW: 39.6 kDa (calculated). UniProtKB acc.no. P07355 (Ser2-Asp339). N-terminal His-tag (9 extra AA). Protein identity confirmed by LC-MS/MS.

Introduction to the Molecule

Annexin A2 is a 36-kDa protein produced by endothelial cells, monocytes, macrophages, trophoblast cells, and some tumor cells and exists both free in the cytoplasm and in association with intracellular and plasma membrane surfaces. Annexin A2 belongs to the annexin family of Ca2+-regulated phospholipid binding proteins, which are expressed in plants, animals, and protists throughout the phylogenetic tree. Annexins possess a series of unique 70 amino acid annexin-repeat modules that form a curved disk and allow for the creation of an intercessory complex between plasma membrane and cytofilaments. Annexin A2 forms heterotetrameric complex containing the S100A10 dimer and two annexin A2 chains significantly alters the properties of this annexin in vitro and also within cells. Importantly, the annexin A2-S100A10 complex can aggregate membrane vesicles at micromolar Ca2+ levels, a property not shared with monomeric annexin A2 or, as a matter of fact, any other annexin. Annexin A2 plays a role in the regulation of cellular growth and in signal transduction pathways. This protein functions as an autocrine factor which heightens osteoclast formation and bone resorption.

Research topic

Oncology, Others

Amino Acid Sequence

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MKHHHHHHAS TVHEILCKLS LEGDHSTPPS AYGSVKAYTN FDAERDALNI ETAIKTKGVD EVTIVNILTN RSNAQRQDIA
FAYQRRTKKE LASALKSALS GHLETVILGL LKTPAQYDAS ELKASMKGLG TDEDSLIEII CSRTNQELQE INRVYKEMYK
TDLEKDIISD TSGDFRKLMV ALAKGRRAED GSVIDYELID QDARDLYDAG VKRKGTDVPK WISIMTERSV PHLQKVFDRY
KSYSPYDMLE SIRKEVKGDL ENAFLNLVQC IQNKPLYFAD RLYDSMKGKG TRDKVLIRIM VSRSEVDMLK IRSEFKRKYG
KSLYYYIQQD TKGDYQKALL YLCGGDD
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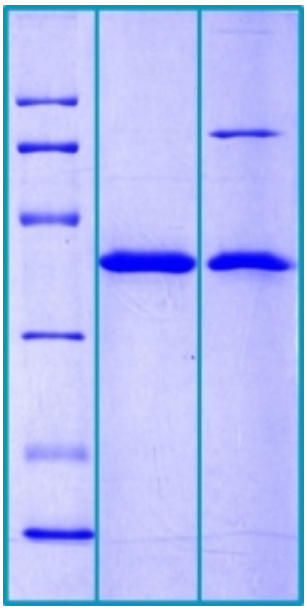
Source

E. coli

Purity

Purity as determined by densitometric image analysis: >95%

SDS-PAGE gel



14 % SDS-PAGE separation of Human Annexin A2:

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. reduced and boiled sample, 2.5 µg/lane

3. non-reduced and non-boiled sample, 2.5 µg/lane

Endotoxin

< 1.0 EU/ug

Formulation

Filtered (0.4 µm) and lyophilized in phosphate buffered saline pH=7.0, 1% (w/v) Sucrose, 4% (w/v) Mannitol

Reconstitution

Add 200 µl of deionized water to prepare a working stock solution of approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store the lyophilized protein at -80 °C. Lyophilized protein remains stable until the expiry date when stored at -80 °C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80 °C for long term storage. Reconstituted protein can be stored at 4 °C for a week.

Quality Control Test

BCA to determine quantity of the protein.
SDS-PAGE to determine purity of the protein.
LAL TEST to determine endotoxin level.

Applications

ELISA, Western blotting

Note

This product is intended for research use only.

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