

## DESCRIPTION

**Source** *E. coli*-derived  
Ala2-Asp321, with a C-terminal 6-His tag  
Accession # NP\_001144

**N-terminal Sequence Analysis** Ala2

**Predicted Molecular Mass** 37 kDa

## SPECIFICATIONS

**SDS-PAGE** 35 kDa, reducing conditions

**Activity** Bioassay data are not available.

**Endotoxin Level** <0.10 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. See Certificate of Analysis for details.

## PREPARATION AND STORAGE

**Reconstitution** Reconstitute at 500 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.

## DATA

Bioactivity not tested



**The Innovator Series.**  
R&D Systems proteins are almost always sold with a bioassay to indicate activity. However, we recognize that sometimes proteins might be novel, and their bioactivity may not be well understood. In addition, some researchers may wish to use polypeptides to make antibodies. To facilitate the advancement of new science, we now offer our Innovator Series of proteins.

## BACKGROUND

Annexin A4 (ANXA4), also known as Lipocortin IV, placental anticoagulant protein II, and zymogen granule membrane-associated protein of 36 kDa (ZAP36), is a member of the Annexin protein family. Annexins are calcium-dependent phospholipid-binding proteins that are preferentially located on the cytosolic face of the plasma membrane. The Annexins consist of a unique N-terminal domain followed by a homologous C-terminal core domain containing the phospholipid-binding sites. The C-terminal domain is comprised of four 60-70 aa annexin repeats which form a tightly packed disc known as the annexin domain. Members of the Annexin family play a role in cytoskeletal interactions, phospholipase inhibition, regulation of cellular growth, and intracellular signal transduction pathways. (1) Annexin A4 regulates the transcription from RNA polymerase II promoter (2). The level of Annexin A4 increases in cytoplasm during apoptosis (3). Human Annexin A4 shares 92% aa sequence identity with mouse and rat Annexin A4.

## References:

1. Gerke, V. *et al.* (2005) Nat. Rev. Mol. Cell Biol. **6**:449.
2. Jeon, Y. J. *et al.* (2010). Cellular and molecular life sciences, **67**:2271.
3. Gerner, C. *et al.* (2000). J. Biol. Chem. **275**:39018