# PRODUCT INFORMATION



## **Annexin A1 Polyclonal Antibody**

Item No. 19708

### **Overview and Properties**

Contents: This vial contains 100 µg of protein A purified polyclonal antibody.

Synonyms: p35, Annexin I, ANXA1, Calpactin II, Chromobindin-9, Inhibitory Protein, Lipocortin I,

Phospholipase A<sub>2</sub>

Full length recombinant Annexin A1 protein Immunogen:

Species Reactivity: (+) Human; other species not tested

**Uniprot No.:** P04083 Form: Liquid

Storage: -20°C (as supplied)

Stability: ≥3 years

Storage Buffer: TBS, pH 7.4, with 50% glycerol, 0.1% BSA, and 0.02% sodium azide

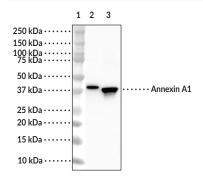
Rabbit Host:

Applications: ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP), Western blot (WB); the

> recommended starting dilution for ELISA, IP, and WB is 1:200, and 1:40 for IHC. Other applications were not tested, therefore optimal working concentration/dilution should

be determined empirically.

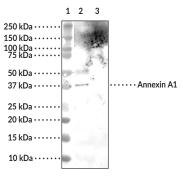
#### **Images**



Lane 1: MW Markers

Lane 2: Annexin A1 recombinant protein

Lane 3: A549 cell lysate

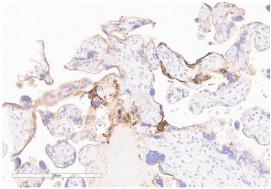


Lane 1: MW Markers

Lane 2: Annexin A1 Polyclonal Antibody (Item No. 19708)

Immunoprecipitation

Lane 3: Negative Monoclonal Control Immunoprecipitation



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human placenta tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Annexin A1 Polyclonal Antibody (Item No. 19708) at a 1:40 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website

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## CAYMAN CHEMICAL

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### Description

Annexins are a superfamily of 13 proteins sharing a high degree of homology. They have in common a core C-terminal domain containing calcium and phospholipid binding motifs, allowing most of them to bind to phospholipid membranes in a calcium-dependent manner. The N-terminal domains vary between family members and provide unique function.<sup>1</sup>

Annexin A1 is an endogenous mediator of inflammation, promoting resolution in a number of ways. Normally expressed in intracellular compartments, it is drawn to the cell membrane and both induced and externalized by glucocorticoid response pathways.<sup>2,3</sup> The glucocorticoid-induced production and release of annexin A1 is the primary means by which glucocorticoids function as anti-inflammatory agents. Annexin A1 inhibits the synthesis of pro-inflammatory eicosanoids by suppressing the function of sPLA2. This, in turn, limits the recruitment of neutrophils into inflammatory sites and down-regulates the production of pro-inflammatory mediators by those neutrophils that enter inflammatory sites.<sup>4</sup> Meanwhile, proteolytic fragments generated in response to increased expression are implicated in producing a marker for phagocytosis.<sup>5</sup>

Annexin A1 also functions in the resolution of inflammation by inducing neutrophil apoptosis, and promoting neutrophil clearance (efferocytosis) by macrophages. The pro-resolving functions of annexin A1 are mediated via binding to FPR2/ALX, a receptor it shares with the specific pro-resolving mediators lipoxin  $A_4$  (LXA<sub>4</sub>; Item No. 90410) and resolvin D1 (RvD1; Item No. 10012554).<sup>4</sup>

The molecule's regulatory role has led to investigation of the downstream effects of annexin A1, including cancer, adaptive immunity, and wound repair.<sup>6-8</sup>

The predicted size of annexin A1 is 38.7 kDa and Cayman's Annexin A1 Polyclonal Antibody detects a size 39 kDa band *via* Western blot and Immunoprecipitation.

#### References

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- Damazo, A.S., Yona, S., Flower, R.J., et al. Spatial and temporal profiles for anti-inflammatory gene expression in leukocytes during a resolving model of peritonitis. J. Immunol. 176(7), 4410-4418 (2006).
- 3. Perretti, M., Croxtall, J.D., Wheller, S.K., et al. Mobilizing lipocortin 1 in adherent human leukocytes downregulates their transmigration. *Nat. Med.* **2(11)**, 1259-1262 (1996).
- 4. Sugimoto, M.A., Vago, J.P., Teixeira, M.M., et al. Annexin A1 and the resolution of inflammation: Modulation of neutrophil recruitment, apoptosis, and clearance. J. Immunol. Res. 2016:8239258, (2016).
- 5. Christmas, P., Callaway, J.C., Fallon, J., et al. Selective secretion of annexin 1, a protein without a signal sequence, by the human prostate gland. J. Biol. Chem. 266(4), 2499-2507 (1991).
- 6. Boudhraa, Z., Bouchon, B., Viallard, C., et al. Annexin A1 localization and its relevance to cancer. Clin. Sci. (Lond) 130(4), 205-220 (2016).
- 7. D'Acquisto, F., Merghani, A., Lecona, E., et al. Annexin-1 modulates T-cell activation and differentiation. *Blood* **109(3)**, 1095-1102 (2007).
- 8. Leoni, G., Neumann, P.-A., Kamaly, N., et al. Annexin A1-containing extracellular vesicles and polymeric nanoparticles promote epithelial wound repair. J. Clin. Invest. 125(3), 1215-1227 (2015).

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