

PRODUCT INFORMATION



Annexin A1 (human, recombinant)

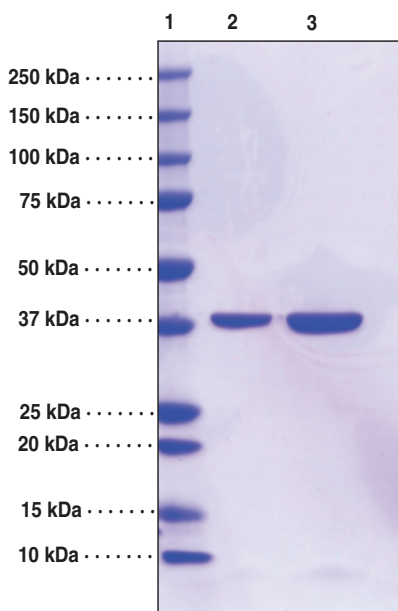
Item No. 19881

Overview and Properties

Synonyms: p35, Annexin I, ANXA1, Calpactin II, Lipocortin I
Source: Recombinant N-terminal His-tagged protein expressed in *E. coli*
Uniprot No.: P04083
Molecular Weight: 40.48 kDa
Storage: -80°C (as supplied)
Stability: ≥2 years
Purity: *batch specific* (≥95% estimated by SDS-PAGE)
Supplied in: *batch specific*
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay
Concentration: *batch specific* mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Annexin A1 (2μg)
Lane 3: Annexin A1 (4 μg)

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

SAFETY DATA
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.

Copyright Cayman Chemical Company, 05/19/2020

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



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 a function.¹ 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.^{2,3} 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 downregulates the production of pro-inflammatory mediators by those neutrophils that enter inflammatory sites.⁴ Meanwhile, proteolytic fragments generated in response to increased expression are implicated in producing a marker for phagocytosis.⁵ 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 A₄ (Item No. 90410) and resolvin D1 (Item No. 10012554).⁴ The molecule's regulatory role has led to investigation of the downstream effects of annexin A1, including cancer, adaptive immunity, and wound repair.⁶⁻⁸

References

1. Gerke, V. and Moss, S.E. Annexins: From structure to function. *Physiol. Rev.* **2002**, 331-371 (2002).
2. 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., Viillard, 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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM