PRODUCT INFORMATION

Annexin V (human, recombinant)

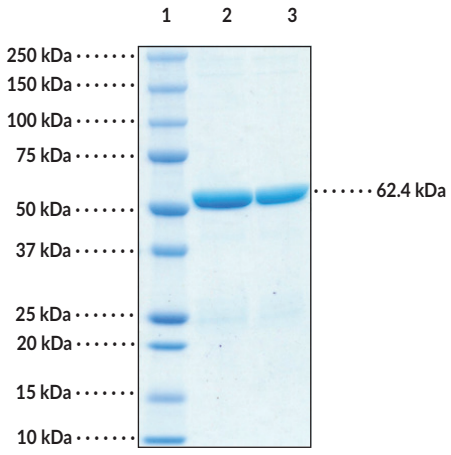
Item No. 20594

Overview and Properties

Synonyms:	Anchorin CII, Annexin A5, Calphobindin I, Endonexin II, Lipocortin V, PP4
Source:	Active recombinant N-terminal GST-tagged annexin V expressed in *E. coli*
Amino Acids:	2-320 (full length)
Uniprot No.:	P08758
Molecular Weight:	62.4 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	***batch specific***
Supplied in:	PBS, pH 7.4, with 10% glycerol
Protein Concentration:	***batch specific*** mg/ml
Activity:	Suitable for cell-based assays

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

Image



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

Representative gel image shown; actual purity may vary between each batch.

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Description

Annexin V is a soluble membrane-binding protein encoded by the *ANXA5* gene in humans that binds to negatively charged phospholipids, such as phosphatidylserine (PS), in a calcium-dependent manner.[1-3] It is expressed in a wide variety of tissues but is detected primarily in placenta and vascular endothelium.[4] Annexin V is comprised of a variable N-terminal domain and four highly conserved annexin repeats that form the membrane-binding core.[1,5] Upon membrane binding, annexin V forms a two-dimensional lattice that is stabilized by protein-protein interactions.[2,5] In activated platelets and apoptotic cells, plasma membrane asymmetry, but not integrity, is disrupted and PS becomes exposed at the cell surface, following which annexin V binds to the surface-exposed PS and inhibits its procoagulant and pro-inflammatory activities.[2,4,6,7] Because of its affinity for PS in apoptotic cell membranes, fluorescent and affinity-labeled versions of annexin V have been used in affinity assays for the detection and quantification of apoptotic cells.[7] Annexin V levels are elevated in tumor tissue from patients with a variety of cancers, including follicular thyroid adenoma, papillary thyroid carcinoma, cervical squamous cell carcinoma, and colorectal cancer.[5] Cayman's Annexin V (human, recombinant) protein can be used for Western blot, ELISA, and cell-based assays.

References

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6. Andree, H.A., Stuart, M.C., Hermens, W.T., *et al.* Clustering of lipid-bound annexin V may explain its anticoagulant effect. *J. Biol. Chem.* **267(25)**, 17907-17912 (1992).
7. van Engeland, M., Nieland, L.J.W., Ramaekers, F.C.S., *et al.* Annexin V-affinity assay: A review on an apoptosis detection system based on phosphatidylserine exposure. *Cytometry* **31(1)**, 1-9 (1998).

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