Annexin V from human placenta
Catalog Number A9460
Storage Temperature –70 °C

Annexin V Biotin Conjugate from human placenta
Catalog Number A7810
Storage Temperature 2–8 °C

Annexin V FITC Conjugate from human placenta
Catalog Number A9210
Storage Temperature 2–8 °C

Annexin V Synonyms: Calphosbindin I; Lipocortin V; PAP-1

Product Description
Annexin V
Molecular mass: ∼36 kDa
pI: 1.2 4.8

Annexin V belongs to a class of Ca\(^{2+}\)-dependent binding proteins shown to be involved in exocytosis, protein kinase C inhibition, and calcium channel activity in cartilage matrix vesicles.\(^1\) All of these functions are related to the ability of annexin to bind to acidic phospholipids. This product has a high affinity for phosphatidylserine and can be used in determination of apoptosis in cells. During early apoptosis, phosphatidylserine, normally found on the cytoplasmic side of the membrane, translocates from the inner part of this membrane to the outer part. This exposes the phosphatidylserine, which can be recognized by annexin V and macrophages. Annexin V and its conjugates may be used to detect apoptotic cells significantly earlier than DNA-based assays.

Annexin V also strongly binds to phosphatidylserine in large unilamellar vesicles at low pH; whereas, at neutral pH, 20–100 µM Ca\(^{2+}\) is required to induce binding.\(^1\)

There are two different classes of annexins based on the interaction of annexins with membranes in the presence of Ca\(^{2+}\): annexins enhancing membrane interactions (I, II, IV, and VII) and annexins inhibiting membrane interactions (V and VI).\(^1\)

Similar to other annexins, the amino acid sequence of Annexin V consists of a core of four repeats of a highly conserved 70 amino acid residue motif and a unique N-terminal tail.\(^3\) Within each repeat, there is a 17 amino acid residue consensus sequence, which is postulated to form part of the Ca\(^{2+}\) and/or phospholipid binding site.

Annexin V-FITC conjugates have applications in flow cytometry, fluorescence microscopy, and laser scanning cytometry for the detection of early apoptotic cells.\(^4-7\)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
The Annexin V products are supplied as aqueous solutions and can be further diluted in standard aqueous buffers or media for use.

Storage/Stability
Annexin V (Catalog Number A9460) is shipped on dry ice and it is recommended to store the product at –70 °C.

The Annexin V conjugates (Catalog Numbers A7810 and A9210) are shipped on wet ice and it is recommended to store these products at 2–8 °C.
References


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