Datasheet

Anti-Annexin V antibody, Mouse Monoclonal

Clone AN5, purified from hybridoma cell culture

A8604

Product Description

Monoclonal Anti-Annexin V (mouse IgG1 isotype) is derived from the hybridoma AN5 produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with purified human Annexin V, Cat. No. A9460. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Cat. No. ISO2.

Monoclonal Anti-Annexin V recognizes human annexin V. The antibody may be used in ELISA, immunocytochemistry, and immunoblotting (~ 35 kDa).

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. All these functions are related to the ability of annexin binding to acidic phospholipids. This protein strongly binds to the phosphatidylserine in large unilamellar vesicles at low pH, whereas at neutral pH, 20-100 µM Ca^{2+} is required to induce binding.There are two classes of annexins based on their interaction with membranes in the presence of Ca^{2+}: annexins enhancing membrane interactions (I, II, IV, VII) and annexins inhibiting membrane interactions (V, VI). Similar to other annexins, the amino acid sequence of the annexin V protein consists of a core of four repeats of a highly conserved 70 amino acid residue motif and a unique N-terminal tail. 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.[1-4]

During early apoptosis, phosphatidylserine, normally found on the cytoplasmic side of the membrane, translocates from the inner part of the membrane to the outer part. This exposes the phosphatidylserine that can be recognized by annexin V. [1-4] This has made annexin V a valuable reagent for the detection of apoptosis.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~ 2 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots. Repeated freezing and thawing, or storage in frost-free freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.5-1.0 µg/mL is recommended using HeLa total cell extract.

Note: In order to obtain the best results in various techniques and preparations we recommend determining the optimal working dilutions by titration.

References

1. Kohler, G., et al., Biochem., 36, 8189-8194 (1997).
2. Blankenberg, F., et al., Q. J. Nucl. Med., 47, 337-348 (2003).
3. Hayes, M.J., and Moss, S.E., Biochem. Biophys. Res. Commun., 322, 1166-1170 (2004).
4. Hayes, M.J., et al., Traffic, 5, 571–576 (2004).

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