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Product Information

Anti-Phosphatidylserine Receptor
produced in rabbit, affinity isolated antibody

Catalog Number **P1495**

Product Description

Anti-Phosphatidylserine Receptor is produced in rabbit using a synthetic peptide corresponding to amino acid residues 363-381 of the human phosphatidylserine receptor, conjugated to maleimide-activated KLH as immunogen. The corresponding sequence in mouse differs by one amino acid. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Phosphatidylserine Receptor (PSR) recognizes human and mouse phosphatidylserine receptor. Applications include immunoprecipitation and immunoblotting (~50-70 kDa). Additional bands may be detected when immunoblotting various extract preparations. Detection of the phosphatidylserine receptor by immunoblotting is specifically inhibited by the immunizing peptide.

Most cells that undergo apoptosis are rapidly recognized, engulfed, and digested by professional phagocytes or by neighboring cells and eliminated from the organism. In this way, tissue exposure to potentially cytotoxic, immunogenic, or inflammatory cellular contents is prevented. As a result neither inflammation nor inappropriate immune responses are induced in this process. Removal of apoptotic cells comprise the following steps: surface alteration and ligand expression on the apoptotic cell, ligand recognition by tethering receptors on the phagocyte, initiation of appropriate signaling pathways in the phagocyte, engulfment and finally, digestion. Various molecules including proteins, carbohydrates, and phospholipids have been suggested to act as cell surface exposed markers for recognition by phagocytes. Virtually all apoptotic cells permanently express phosphatidylserine (PS) on the outer leaflet of their plasma membrane. Such loss of phospholipids asymmetry and exposure of PS does not occur in resting cells and appears only transiently following activation of certain cells.

Phosphatidylserine Receptor (PSR) has been reported[1] and shown to recognize phosphatidylserine in a stereospecific manner. PSR is an evolutionarily conserved glycoprotein that is widely expressed in cells and tissues. It is very susceptible to cleavage by protease or elastase. PSR engagement plays an important role in macropinocytosis and uptake of tethered apoptotic cells. Cooperation with other receptors and their ligands may also be needed for ingestion of apoptotic cells.[3-7] PSR is also involved in suppression of inflammatory and immune responses.[8]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin (BSA) and 15 mM sodium azide.

Antibody Concentration: 1.0-1.5 mg/mL

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.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. 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 dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a minimum working antibody dilution of 1:500 is recommended using whole extracts of mouse NIH-3T3 cells.

Immunoblotting: a minimum working antibody dilution of 1:1,000 is recommended using whole extracts of human HeLa or A549 cells.

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

References

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DS,KAA,PHC 09/11-1