

Sheep anti-human Vimentin

Affinity-Purified IgG

0.5 mg

Product #: SAVM-AP

Lot #: XXXX

Expiry date: XXXX

Store at -10 to -20°C

For Research Use Only.

Not for use in diagnostic procedures.

Description of Vimentin

Intermediate filaments (IFs), along with microfilaments and microtubules, are the three major filament systems that form the architectural basis of most eukaryotic cells. Vimentin, with a molecular weight of 58 kDa, is a Type III intermediate filament found in cells of mesenchymal origin including endothelial cells, megakaryocytes and platelets as well as in most cultured cell lines. As with other IFs, vimentin provides a physical linkage between the plasma membrane and the nuclear envelope. The carboxy-terminus of vimentin associates with the lamin B of the nuclear envelope whereas the amino-terminus associates with the plasma membrane either directly or indirectly. In general, it is believed that IFs, including vimentin, provide a network onto which various enzyme systems, intracellular structures and organelles are spatially arranged within the cytoplasm. IFs may also play an active role in the re-organization of intracellular components in response to extracellular signals via their disassembly and reassembly. In normal vascular endothelium, vimentin, along with other cytoskeletal proteins, are typically not exposed to extracellular plasma proteins. However, with damage to endothelial cells, exposure of these cytoskeletal components may play a role in thrombogenesis or inflammatory responses. For example, it has been demonstrated that vimentin can bind complement components as well as immunoglobulins. Vimentin has also been shown to bind vitronectin and vitronectin/PAI-1 complexes in LPS-damaged endothelial cells.¹⁻³

REFERENCES and REVIEWS

1. Steinert, P.M. and Roop, D.R. Molecular and cellular biology of intermediate filaments. *Ann. Rev. Biochem.* 57:593-625, 1988.
2. Albrecht, D.L., Mills, J.W. and Noelle, R.J. Membrane Ig-Cytoskeletal interactions: receptor cross-linking results in the formation of extensive filamentous arrays of vimentin. *J. Immunol.* 144:3251-3256, 1990.
3. Podor, T.J. and Loskutoff, D.J. Binding of PAI-1/vitronectin complexes to the intermediate filament cytoskeleton of endotoxin injured endothelial cells. *Fibrinolysis* (suppl.), 4:263a, 1990.

Product Specifications

Description:

Vial containing XXXX ml of IgG purified by affinity chromatography on immobilized recombinant vimentin 20 kDa fragment. Total protein is 0.5 mg.

Format:

Affinity-purified IgG (APIgG), clear liquid.

Host Animal:

Sheep

Immunogen:

Purified recombinant human vimentin produced in bacteria. This protein constitutes a soluble 20 kDa fragment from the amino-terminus of vimentin.

Concentration:

APIgG concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient ($E_{280}^{1\%}$) of 13.4.

Buffer:

10 mM HEPES, pH 7.4, 150 mM NaCl, 50% (v/v) glycerol.

Storage:

Store between -10 and -20°C. Product will become viscous but will not freeze. Avoid storage in frost-free freezers. Keep vial tightly capped. Allow product to warm to room temperature and gently mix before use.

Specificity:

This antibody is specific for vimentin as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of enriched antibodies to vimentin.

Species Cross Reactivity: (immunodiffusion vs. citrated plasma)

Not determined