

Product Information

Monoclonal Anti-VPS4A

Clone VPS4-110 produced in mouse, purified immunoglobulin

SAB4200215

Product Description

Monoclonal Anti-VPS4A (mouse IgG1 isotype) is derived from the hybridoma VPS4-110 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a fragment of human VPS4A (GeneID: 27183), conjugated to KLH. The corresponding sequence is identical in mouse and rat and differs by 3 amino acids in human VPS4B. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-VPS4A recognizes human, mouse, rat, bovine, and canine VPS4A. The antibody may be used in several immunochemical techniques including immunoblotting (~ 50 kDa) and immunoprecipitation. Detection of the VPS4A band by immunoblotting is specifically inhibited by the immunizing peptide.

Vps4A is a member of the AAA protein family (ATPases associated with diverse cellular activities), and is the homolog of the yeast Vps4 protein. In humans, two paralogs of the yeast protein have been identified, Vps4A and Vps4B, that share a high degree of amino acid sequence similarity with each other, and also with yeast Vps4 and mouse Skd1 proteins. The mouse Skd1 (suppressor of K⁺ transport defect 1) has been shown to be actually a yeast Vps4 ortholog.

Functional studies indicate that both human paralogs associate with the endosomal compartments, and are involved in intracellular protein trafficking, similar to Vps4 protein in yeast. Vps4 mediates endosomal membrane protein sorting, retroviral budding, and cytokinesis by recognizing membrane-associated ESCRT-III assemblies and catalyzing their disassembly. The gene encoding Vps4A has been mapped to chromosome 16 while the gene for Vps4B resides on chromosome 18.¹⁻⁵

Reagent

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

Antibody concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For research 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 extended storage, freeze at –20 °C 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 1–2 µg/mL is recommended using whole extracts of mouse 3T3 or human HEK-293 cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Yoshimori, T., et al., *Mol. Biol. Cell*, 11, 747–763 (2000).
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3. Lata, S., et al., *Science*, 321, 1354–1357 (2008).
4. Obita, T., et al., *Nature*, 449, 735–739 (2007).
5. Wollert, T., et al., *Nature*, 458, 172–177 (2009).

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SAB4200215 Rev 05/21

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