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Product Information

Anti-Epsin1 (internal)
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200583**

Product Description

Anti-Epsin1 (internal) is produced in rabbit using as immunogen a synthetic peptide corresponding to an internal sequence of human epsin1 isoform A (GeneID: 29924), conjugated to KLH. The corresponding sequence is identical in human espin1 isoforms B and C, and highly conserved (82% identity) in rat and mouse epsin1. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Epsin1 (internal) specifically recognizes human, rat and mouse epsin1. The antibody may be used in several immunochemical techniques including immunoblotting (~90 kDa) and immunofluorescence. Detection of the epsin1 band by immunoblotting is specifically inhibited by the espin1 immunizing peptide.

Epsin1 (also known as EPN1) is an endocytic adaptor protein that plays a central role in the clathrin-mediated internalization and degradation of ubiquinated proteins.[1,2] There are currently at least three known mammalian epsin variants including epsin 1, 2 and 3. Epsin1 interacts with Eps15 subunit of the clathrin adaptor AP2, clathrin and other accessory proteins. Epsin1 protein contains an epsin N-terminal homology (ENTH) region, a single clathrin-binding LVDLD motif and two or three (depending on splice variations) tandem ubiquitin-interacting motifs (UIMs). The central region of epsin contains a clathrin interaction motif as well as repeats of a DPW motif, which binds to AP-2. Epsin1 is involved in recruitment of ubiquitinated EGFR into clathrin-coated pits.[3] Epsin1 has been shown to be required in mitotic membrane and spindle organization.[4] Both epsin and Eps15, like other cytosolic components of the synaptic vesicle endocytic machinery, undergo constitutive phosphorylation and depolarization-dependent dephosphorylation in nerve terminals.[5] The epsin family of endocytic adaptors has been recently found to be upregulated in cancer and epsin1 overexpression promotes cancer cell invasion.[6]

Reagent

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

Antibody Concentration: ~1.0 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 extended 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 dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 µg/mL is recommended using extracts of SH-SY5Y cells and of mouse brain (S1 fraction).

Immunofluorescence: a working concentration of 2-4 µg/mL is recommended using NRK cells.

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

References

1. Wendland, B., et al., *Nat. Rev. Mol. Cell. Biol.,* **3**, 971-977 (2002).
2. Zwang, Y., and Yarden, Y., *Traffic*, **7**, 349-363 (2009).
3. Kazazic, M., et al., *Traffic*, **10**, 235-245 (2009).
4. Liu, Z., and Zheng, Y., *J. Cell Biol.,* **186**, 473-480 (2009).
5. Jakobsson J., et al., *Proc. Natl. Acad. Sci. USA,* **105**, 6445-6450 (2008).
6. Coon, B.G., et al., *J. Biol. Chem.,* **285**, 33073-33081 (2010).

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