3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Anti-Epsin1
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200582**

Product Description

Anti-Epsin1 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 in rat and mouse epsin1. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Epsin1 specifically recognizes human, rat and mouse epsin1. The antibody may be used in several immunochemical techniques including immunoblotting (~90 kDa), immunofluorescence and immunohisto-chemistry. 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 also 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.

Immunohistochemistry: a working concentration of 10-20 µg/mL is recommended using formalin-fixed, paraffin-embedded rat brain.

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).

ER,RC,PHC 04/13-1

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