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Product Information

Anti-PRAS40 (C-terminal)
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200312**

Product Description

Anti-PRAS40 (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminus of human PRAS40 (GeneID: 84335), conjugated to KLH. The corresponding sequence is identical in mouse and rat PRAS40. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-PRAS40 (C-terminal) specifically recognizes human, mouse and rat PRAS40. Applications include the detection of PRAS40 by immunoblotting (~40 kDa), immunoprecipitation, immunofluorescence and immunohistochemistry. Detection of the PRAS40 band by immunoblotting is specifically inhibited by the PRAS40 immunizing peptide.

PRAS40 (proline-rich Akt-substrate of 40 kDa, also known as AKT1S1), is a raptor binding protein that inhibits mTORC1 kinase activity. The rapamycin-sensitive mTORC1 consists of mTOR, raptor, mLST8 and PRAS40, and controls protein translation. PRAS40 contains a TOR signaling (TOS) motif that mediates its binding to mTORC1. PRAS40 is involved in the PI3K-Akt/PKB survival pathway. Phosphorylation of PRAS40 by Akt and mTORC1 disrupts the binding between mTORC1 and PRAS40, relieves the inhibitory effect of PRAS40 on mTORC1 activity, and leads to the binding of PRAS40 to 14-3-3, a cytosolic anchor protein. The binding of PRAS40 to 14-3-3 requires amino acids and insulin, and is partially inhibited by rapamycin.[1-5]

Reagent

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

Antibody Concentration: ~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 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 1.5-3.0 µg/mL is recommended using NIH3T3 cell extracts.

Immunoprecipitation: a working amount of 5-10 µg is recommended using extracts of HEK-293T cells.

Immunofluorescence: a working concentration of 8-16 µg/mL is recommended using PC12 cells.

Immunohistochemistry: a working concentration of 5-10 µg/ml is recommended using formalin-fixed, paraffin-embedded human breast carcinoma.

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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3. Wang, L., et al., *J. Biol. Chem.*, **282**, 20036-20044 (2007).
4. Sancak, Y., et al., *Mol. Cell*, **25**, 903-915 (2007).
5. Nascimento, E.B., and Ouwens, D.M., *Arch. Physiol. Biochem.*, **115**, 163-175 (2009).

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