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ProductInformation

Anti-PRL-3
Developed in Rabbit, IgG Fraction of Antiserum

Product Number **P 0498**

Product Description

Anti-PRL-3 is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 160-169 of human PRL-3 with N-terminal added cysteine, conjugated to KLH. The corresponding sequence is identical in mouse. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-PRL-3 recognizes human PRL-3 and does not cross-react with human PRL-1 and PRL-2. Applications include immunoblotting (~25 kDa), immunoprecipitation and immunohistochemistry. Detection of the PRL-3 band by immunoblotting is specifically inhibited with the immunizing peptide.

PRL-3 (Phosphatase of Regenerating Liver, also known as PTP4A3) is a member of a small class of protein tyrosine phosphatases (PTPs). The family currently includes only three small proteins, PRL-1, PRL-2 and PRL-3, with at least 75% amino acid sequence similarity that possess the PTP domain and a characteristic C-terminal prenylation motif. PRL-1, PRL-2 and PRL-3 are farnesylated and normally associated with the membrane of the cell surface and the early endosome. Non lipidated PRL-1, PRL-2 and PRL-3 are located at the nucleus.[1, 2] PRL phosphatases are involved in growth regulation, proliferation and cell invasion.[3, 4] Among normal human adult tissues, PRL-3 is expressed predominantly in heart and skeletal muscle.[3] PRL-3 is expressed at high levels in liver metastasis derived from colorectal cancer but at lower levels in nonmetastatic tumors and normal colorectal epithelium.[5] Zeng et al. reported that PRL-3 promotes cell migration, invasion and metastasis in mice.[4] PRL-3 is also involved in the modulation of intracellular calcium transients induced by Angiotensin-II *in vitro*.[3] PRL-3 may constitute a useful marker for metastasis and might be a new therapeutic target.

Reagent

Anti-PRL-3 is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous 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 is not recommended. 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

By immunoblotting, a working antibody dilution of 1:500-1:1,000 is recommended using a whole extract of human HepG2 cells and a chemiluminescent detection reagent.

By immunoprecipitation, 0.5-1 µl of the antibody immunoprecipitates PRL-3 from a preparation containing recombinant human PRL-3.

By immunohistochemistry, a working antibody dilution of 1:250-1:500 is recommended by biotin/ExtrAvidin™-peroxidase staining of protease digested formalin-fixed, paraffin-embedded human heart sections.

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

References

1. Zeng, Q., et al., J. Biol. Chem., **275,** 21444-21452 (2000).
2. Saha, S., et al., Science, **294**, 1343-1346 (2001).
3. Matter, W.F., et al., Biochem. Biophys. Res. Commun., **283**, 1061-1068 (2001).
4. Zeng, Q., et al., Cancer Res., **63,** 2716-2722 (2003).
5. Bardelli, A., et al., Clinical Cancer Res., **9,** 5607-5615 (2003).

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