



Product Information

Monoclonal Anti-PINCH-1

Clone PINCH-N173

Purified Mouse Immunoglobulin

Product Number **P 9371**

Product Description

Monoclonal Anti-PINCH-1 (mouse IgM isotype) is derived from the hybridoma PINCH-N173 produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with a peptide corresponding to amino acids 14-31 of human PINCH-1, conjugated to KLH. The isotype is determined using Sigma ImmunoType™ Kit (Sigma ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2).

Monoclonal Anti-PINCH-1 recognizes human, monkey, bovine, canine, rat, and mouse PINCH-1 (~ 37 kDa). The antibody may be used in ELISA and immunoblotting.

Cell adhesion to extracellular matrix (ECM) is an important process that controls cell morphology, proliferation, migration, differentiation, and survival. Transduction of extracellular matrix signals through integrins influences intracellular and extracellular functions, and appears to require interaction of integrin cytoplasmic domains with cellular proteins. ILK (integrin-linked kinase) is a protein that interacts with the cytoplasmic domain of β 1- and β 3-integrins. It is an ubiquitously expressed 50-59 kDa serine/threonine protein kinase that has been implicated in integrin, growth factor and Wnt signaling pathways.¹⁻³ ILK comprises three structurally conserved domains. The C-terminal domain contains a protein kinase catalytic site and a binding site for the integrin β 1 subunit. The PH-like domain of ILK binds PtdIns(3,4,5)P₃ and participates in the regulation of the kinase activity.⁴ The N-terminal domain comprises primarily four ANK repeats responsible for interaction with the LIM-adaptor protein PINCH.^{5,6} The interaction with PINCH proteins

(PINCH-1 and 2) is important for localization of ILK protein to cell matrix contact sites. Human PINCH-1 and 2 are encoded by two different genes that are 82% identical in their amino acid sequence. PINCH-2 is co-expressed and co-localized with PINCH-1/ILK complex. Furthermore, over expression of PINCH-2 disturbs the ILK/PINCH-1 complex. Thus PINCH-2 serves as a regulator of this complex.^{7,8}

Monoclonal antibodies specific for PINCH-1 are an important tool for studying intracellular signaling involved in cell adhesion.

Reagent

Monoclonal Anti-PINCH-1 is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: Approx. 2 mg/ml.

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 hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged 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 dilution samples should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody concentration of 1-2 µg/ml is recommended using total cell extract of 293T cells.

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

References

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6. Wu, C., *J. Cell Sci.*, **112**, 4485-4489 (1999).
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