Monoclonal Anti-Calponin
Clone hCP
produced in mouse, ascites fluid

Catalog Number C2687

Product Description
Monoclonal Anti-Calponin (mouse IgG1 isotype) is derived from the hCP hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Human uterus smooth muscle extract was used as the immunogen. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Catalog Number ISO2).

Monoclonal Anti-Calponin, clone hCP (also cited as CALP), localizes calponin (34 kDa) in mammalian smooth muscle by immunoblotting assays. In human uterus, an additional band of ~27 kDa (l-calponin) may also be stained. The antibody does not cross-react with skeletal, cardiac, or non-muscle tissue calponin. Nevertheless, the antibody exhibits cross-reactivity with an epitope (150 kDa range) in human or mouse skeletal muscle. It exhibits smooth muscle specificity when used in immunohistochemistry. The product stains vascular and visceral smooth muscle cells in tissue sections and primary cultured cells (or early passages), but not most cell lines originally derived from smooth muscle. It does not stain epithelial, endothelial or connective tissue fibroblast cells. The product reacts with smooth muscle tissue from mammals (human, mouse, rabbit, pig, and rat), but not from chicken.

Monoclonal Anti-Calponin may be used for the localization of smooth muscle calponin using immunoblot, dot blot, and immunocytochemistry.

Calponin, a 34 kDa calmodulin, or F-actin binding, troponin-like protein, is an integral part of the actin-linked contractile machinery in smooth muscle. Calponin shares a common antigenic determinant with the C-terminal segment of troponin T and binds to a specific site of each tropomyosin molecule. The binding strength of calponin to tropomyosin is weakened in the presence of Ca<sup>2+</sup>.

Monoclonal Anti-Calponin may be used to investigate the involvement of calponin in contraction, cell movement, shape change, angiogenesis, exocytosis, and endocytosis. Calponin is a very specific and reliable smooth muscle marker. A specific antibody to calponin can be used to identify smooth muscle cells and cells that express certain smooth muscle-like features, i.e., myofibroblasts and myoepithelial cells. Monoclonal Anti-Calponin can be used to identify and localize calponin in smooth muscle elements, identify and classify mesenchymal tumors, and study calponin expression in normal and malignant cell proliferations.

Reagent
The product is provided as ascites fluid with 0.1% sodium azide as a preservative.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. 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. 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 extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile
The minimum working dilution of 1:10,000 was determined with human uterus extract by an immunoperoxidase immunoblot technique.

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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