



Calponin

IHC of Calponin on an FFPE Leiomyoma Tissue

Description Calponin is a 34 kDa polypeptide that interacts with actin, tropomyosin, and calmodulin. It is involved in smooth-muscle contraction mechanisms and is restricted exclusively to smooth-muscle tissue. Calponin is a calcium-binding protein. Calponin tonically inhibits the ATPase activity of myosin in smooth muscle. Phosphorylation of calponin by a protein kinase (which is dependent upon calcium binding to calmodulin) releases the calponin's inhibition of the smooth-muscle ATPase.

Calponin has been found to be useful in differentiating benign sclerosing lesions of the breast from Carcinoma. Calponin positivity has also been noted in Malignant Myoepithelioma and Pleomorphic Adenoma of Salivary Gland origin, as well as in Angiomatoid Malignant Fibrous Histiocytoma.

Antibody Type	Mouse Monoclonal	Clone	CALP-A6
Isotype	IgG1/K	Reactivity	Paraffin, Frozen
Localization	Cytoplasmic	Control	Appendix, Uterus, Leiomyoma
Storage	Store at 2°-8°C	Stability	2 years

For long-term storage of the concentrated antibody, it is recommended that aliquots of the antibody be frozen at -20°C in glycerol 50% (frost-free freezers are not recommended). Repeated freezing and thawing must be avoided. Dilute using an antibody diluent such as ImmunoDetector Protein Block/Antibody Diluent (BSB 0040 and BSB 0041) or ImmunoDNA Background Blocker (BSB 0103-BSB 0107).

Presentation Anti-Calponin (CALP-A6) is a mouse monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

Availability	Catalog No.	Antibody Type	Dilution	Volume/QTY
	BSB 5120	Prediluted	Ready-To-Use	3.0 ml
	BSB 5121	Prediluted	Ready-To-Use	7.0 ml
	BSB 5122	Prediluted	Ready-To-Use	15.0 ml
	BSB 5123	Concentrated	1:50-1:200	0.1 ml
	BSB 5124	Concentrated	1:50-1:200	0.5 ml
	BSB 5125	Concentrated	1:50-1:200	1.0 ml
	BSB 5126	Control Slides		5

Note: For concentrated antibodies, please centrifuge prior to use to ensure recovery of all product.

- References**
1. NP, Wan BC, et al. *Appl. Immunohistochem.* 1997;5(3):141-151
 2. Nagao T, Sugano I, Ishida Y, et al. *Cancer.* 1998;Oct1:83(7):1292-9
 3. Savara AT, Gown AM, Zarbo RJ, *Mod Pathol.* 1997;Nov;10(11):1093-1100
 4. Fanburg-Smith JC, Meittinen M, *Hum Pathol.* 1999;Nov;30(11):1336-43

Protocol Suggested protocol on reverse

Recommended Immunohistochemical Protocol

- Pretreatment**
1. Cut and mount 3-4 micron formalin-fixed paraffin-embedded tissues on positive charged slides.
 2. Air dry for 2 hours at 58° C.
 3. Deparaffinize, dehydrate and rehydrate tissues.
 4. Subject tissues to heat epitope retrieval using a suitable retrieval solution such as **ImmunoDNA Retriever with Citrate** (BSB 0020-BSB 0023) or **EDTA** (BSB 0030-BSB 0033).
 5. Any of three heating methods may be used:
 - a. **Electric Pressure Cooker**
Place standoff rack at base of pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high, and incubate for 15 minutes. Open and immediately transfer slides to room temperature.
 - b. **Water Bath Method**
Place tissues/slides in a pre-warmed staining dish or coplin jar containing the **ImmunoDNA Retriever with Citrate** or **EDTA** in a water bath set at 95°-99° C. Incubate for 30-60 minutes.
 - c. **Conventional Steamer Method**
Place tissues/slides in a pre-warmed staining dish or coplin jar containing the **ImmunoDNA Retriever with Citrate** or **EDTA** in a Steamer, cover and steam for 30-60 minutes.
 6. After heat treatment, transfer slides in **ImmunoDNA Retriever with Citrate** or **EDTA** to room temperature and let stand for 15-20 minutes.
 7. Wash slides with IHC wash buffer or DI water.
 8. Continue IHC staining protocol.

Immunohistochemical Protocol

Step	ImmunoDetector (AP or HRP)	PolyDetector (AP or HRP)
Peroxidase/AP Block	5 minutes	5 minutes
Primary Antibody	30 minutes	45 minutes
Secondary Biotinylated Link	10 minutes	Not Applicable
AP or HRP Label	10 minutes	45 minutes
Substrate-Chromogen	5-10 minutes	10 minutes
Counterstaining	Time varies with counterstain	Time varies with counterstain

