Novocastra™ Liquid Mouse Monoclonal Antibody Muscle Specific Actin

Product Code: NCL-L-MSA-594

Intended Use	FOR RESEARCH USE ONLY.
Specificity	Human Muscle Specific Actin (MSA).
Clone	SC28
Ig Class	IgG1
Antigen Used for Immunizations	Prokaryotic recombinant protein corresponding to 187 amino acids of the human MSA molecule.
Hybridoma Partner	Mouse myeloma (p3-NS1-Ag4.1).
Preparation	Liquid tissue culture supernatant containing 15 mM sodium azide. Volume as indicated on vial label.
Effective on Frozen Tissue	Not evaluated.
Effective on Paraffin Wax Embedded Tissue	Yes (using heat induced epitope retrieval with citrate-based buffer, pH 6.0: see overleaf).
Recommendations on Use	Immunohistochemistry: Typical working dilution 1:200. 30 minutes primary antibody incubation at 25 °C. Heat induced epitope retrieval technique with citrate-based buffer, pH 6.0. Polymer detection recommended. Western Blotting: Not recommended.
Positive Controls	Immunohistochemistry: Normal bowel.
Staining Pattern	Cytoplasmic.
Storage and Stability	Store liquid antibody at 4 °C. Under these conditions, there is no significant loss in product performance up to the expiry date indicated on the vial label. Prepare working dilutions on the day of use.
General Overview	Muscle Specific Actin (MSA) is a highly conserved, ubiquitous protein found in muscle and some non-muscle cells. Actins can be divided into three subsets, alpha actins found in muscle tissue cells, beta and gamma actins found in non-muscle cells and a small subset of gamma actins also found in muscle tissue cells. In normal tissues, expression is found in striated fibers of skeletal muscle, smooth muscle in arteries, veins and pericytes of smaller arteries, muscle in bowel, myometrium of the uterus, prostatic stroma, capsule cells of liver, kidney, lymph node and spleen, the myoepithelial layers of mammary ducts and glands, eccrine sweat glands and salivary glands. Expression is not found in epithelial cells, lymphoid cells, macrophages, connective tissue and neuronal cells. In neoplastic tissues, expression has been reported in soft tissue tumors with muscle differentiation e.g. leiomyomas, leiomyosarcomas and rhabdomyosarcomas of varying subtypes. Non-muscle sarcomas, carcinomas, melanomas and lymphomas are non-reactive.
General References	Chaponnier C and Gabbiani G. Journal of Pathology. 2004; 204:386–395. Hodgkinson J. Journal of Muscle Research and Cell Motility. 2000; 21:115–130.

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BIOSYSTEMS

Instructions for Use

Heat Induced Epitope Retrieval Combined With Polymer Detection For Immunohistochemical Demonstration On Paraffin Sections

1. Cut and mount sections on slides coated with a suitable tissue adhesive.
2. Deparaffinize sections and rehydrate to distilled water.
3. Place sections in 0.5% hydrogen peroxide/methanol for 10 minutes (or use other appropriate endogenous peroxidase blocking procedure). Wash sections in tap water.
4. Heat 1500 mL of the recommended epitope retrieval solution (Citrate based pH 6.0 - Epitope Retrieval Solution unless otherwise indicated overleaf) in a stainless steel pressure cooker until boiling. Cover but do not lock lid.
5. Position slides into metal staining racks (do not place slides close together as uneven staining may occur) and lower into pressure cooker ensuring slides are completely immersed in epitope retrieval solution. Lock lid.
6. When the pressure cooker reaches operating temperature and pressure (after about 5 minutes) start a timer for 1 minute (unless otherwise indicated on the data sheet).
7. When the timer rings, remove pressure cooker from heat source and run under cold water with lid on. DO NOT OPEN LID UNTIL THE INDICATORS SHOW THAT PRESSURE HAS BEEN RELEASED. Open lid, remove slides and place immediately into a bath of tap water.
8. Wash sections once using fresh Tris-Buffered Saline (TBS, pH 7.6) buffer for 5 minutes.
9. Place sections in diluted normal serum (eg NCL-G-SERUM) for 10 minutes.
10. Incubate sections with primary antibody.
11. Wash twice, each time using fresh TBS buffer for 5 minutes.
12. For visualization of the bound primary antibody, follow instructions supplied with the Polymer Detection System.
13. Counterstain with hematoxylin (if required), dehydrate and mount.

** (In most applications, Phosphate Buffered Saline, pH 7.6, can be used instead of TBS, pH 7.6).*

Safety Note

To ensure the correct and safe use of your pressure cooker, PLEASE READ THE MANUFACTURER'S INSTRUCTIONS.