

Data Sheet

Alpha Smooth Muscle Actin

ready to use - prediluted liquid mouse monoclonal antibody
RTU-SMA

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| Specificity | Human alpha smooth muscle actin. Reactive with smooth muscle cells in blood vessel walls, gut wall, myometrium and arrectores pili of skin. Myoepithelial cells such as those in breast and salivary gland also contain actin. |
| Clone | α sm-1 |
| Ig Class | IgG2a |
| Antigen used for immunisations | Synthetic amino terminal decapeptide of alpha smooth muscle isoform of actin. |
| Hybridoma partner | Mouse myeloma (p3-NS1-Ag4-1). |
| Preparation | Tissue culture supernatant diluted in 5% horse serum in PBS containing 12mM sodium azide. Volume as indicated on vial label. |
| Effective on frozen tissue | Yes |
| Effective on paraffin wax embedded tissue | Yes. Trypsinisation of paraffin sections may be required. |
| Recommendations on use | <p>Immunohistochemistry: Typical working dilution: NEAT. 15 minutes primary antibody incubation at 25°C when used in conjunction with the Novostain Universal Quick Kit (Ready to Use), code NCL-RTU-Qu. Recommendations on use will differ if other detection systems are used eg Standard ABC technique.</p> <p>Not recommended for use on Ventana automated staining systems (Ventana Medical Systems Inc., USA).</p> |
| Positive controls | Bowel wall, with distinct staining of the muscularis mucosae and the muscularis propria. |
| Staining pattern | Cytoplasmic |
| Storage and stability | Store ready to use prediluted liquid antibody at 4°C. Return to 4°C immediately after use. Under these conditions, there is no significant loss in product performance up to the expiry date indicated on the vial label. |
| Legal consideration | RTU-SMA is recommended FOR RESEARCH USE ONLY . |

Application

RTU-SMA labels alpha smooth muscle actin found in smooth muscle cells. These cells can be found in vascular walls, intestinal muscularis mucosae and muscularis propria and in the stroma of various tissues. RTU-SMA also reacts with myoepithelial cells of various glands, notably salivary and mammary glands. In neoplastic tissues, RTU-SMA is useful for the detection of leiomyomas and leiomyosarcomas. The antibody is also a marker for myogenic soft tissue tumours and smooth muscle differentiation.

References

Mason D and Gatter K. The role of immunocytochemistry in diagnostic pathology. *Journal of Clinical Pathology*. **40**: 1042-1054 (1987).
 Skalli O, Ropraz P, Trzeciak A, *et al.*. A monoclonal antibody against α -smooth muscle actin: a new probe for smooth muscle differentiation. *The Journal of Cell Biology*. **103**: 2787-2796 (1986).

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