

Actin, α -Smooth Muscle; Clone 1A4

Catalog Number	Format	Volume
A00002-0002	(Ready-To-Use)	2 ml
A00002-0007	(Ready-To-Use)	7 ml
A00002-0025	(Ready-To-Use)	25 ml
A00002-C.1	(Concentrate)	0.1 ml
A00002-C	(Concentrate)	1 ml

Intended Use

For In Vitro Diagnostic use. This antibody is intended for the qualitative visualization of the anatomical elements listed in the Specificity section. It is intended to be used within an Immunohistochemistry (IHC) procedure on formalin-fixed paraffin-embedded (FFPE) human tissue followed by visualization by light microscopy. Any diagnostic interpretation of the results of this antibody is to be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

Description

Titer/Working Dilution: Ready-to-Use: No further dilution required.

Concentrate: Suggested dilution is 1:300-500

Species:

Mouse

Immunogen:

N-terminal decapeptide of alpha smooth muscle isoform of actin and conjugated to KLH.

Clone:

1A4

Isotype:

IgG2a, Kappa.

Entrez Gene ID:

596 (Human)

Hu Chromosome Loc.:

10q23.31

Synonyms:

ACTA2, Actin Alpha 2 Smooth Muscle Aorta, Actin Aortic Smooth Muscle, Actin Vascular Smooth Muscle, ACTSA, ACTVS, Alpha 2 Actin, Alpha Actin 2, Alpha Cardiac Actin, Alpha Smooth Muscle, Alpha-actin-2, Aortic Smooth Muscle, ASMA, Cell Growth-inhibiting Gene 46 Protein, Growth Inhibiting Gene 46

Mol. Wt. of Antigen:

42kDa

Format:

Ready-To-Use antibody has been pretitered and quality controlled to work on formalin-fixed paraffin-embedded as well as acetone fixed cryostat tissue sections. No further titration is required.

Concentrate antibody is provided at 200 μ g/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% Sodium Azide.

Specificity:

This antibody is highly specific to actin from smooth muscles. Its epitope lies in the first four N-terminal amino acids. This antibody does not stain cardiac or skeletal muscle; however, it stains myofibroblasts and myoepithelial cells. In most cases of rhabdomyosarcoma, this antibody yields negative results whereas muscle specific actin and myogenin are positive. Leiomyosarcomas are positive only with muscle specific actin and smooth muscle actin and are negative with anti-myogenin.

Background:

Actin is a major component of the cytoskeleton and is present in most cell types. This antibody could be used together with anti-muscle specific actin and myogenin in making a diagnosis of smooth muscle and skeletal muscle tumors.

Species Reactivity:

Human, Baboon, Monkey, Cow, Pig, Sheep, Goat, Cat, Dog, Rabbit, Mouse, Rat, Guinea Pig and Chicken. Others not known.

Positive Control:

Blood vessels in all tissues, smooth muscle or leiomyosarcoma.

Cellular Localization:

Cytoplasmic

Microbiological State:

Nonsterile.



Uterus stained using Actin, α -Smooth Muscle; Clone 1A4. No pretreatment with HIER Solution, PolyTek Anti-Mouse Polymerized HRP and DAB Chromogen/Substrate (High Contrast). Counterstained with Hematoxylin, Mayer's (Lillie's Modification). Final magnification 200X.

Materials and Reagents Required but not Provided

- Control tissue and reagents
- Xylene, graded alcohols, and deionized/distilled water
- Antibody Diluent.
- IHC detection system. Suggested: ScyTek Cat# ABZ125 "CRF Anti-Polyvalent HRP Polymer" and ScyTek Cat# ACV500 "DAB Chromogen/Substrate Kit (High Contrast)".
- Wash buffer for rinses (ScyTek Cat# TBT500)
- HIER Retrieval Solution
- Hematoxylin counterstain and bluing reagent (ScyTek Cat# HMM500 and BRT500)
- Mounting medium and coverslips

Note: ScyTek Laboratories has a wide range of IHC reagents and ancillaries that can be found at scytek.com.


Procedure

- Tissue Section Pretreatment (Not Required):** In-house studies show no increase in staining intensity with Heat Induced Epitope Retrieval (HIER).
- Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.
- Visualization:** For maximum staining intensity we recommend the "CRF Anti-Polyvalent HRP Polymer" (ScyTek catalog# ABZ125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).


Storage and Stability

Do not Freeze. Store at 2-8°C. Return to 2-8° immediately after use. Do not use after expiration date printed on label. Verify visually that antibody has not been contaminated before use. Do not use if reagent becomes cloudy or precipitates.

Storage: 2° C  8° C

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Limitations

Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used. This data sheet's recommendations and procedures were validated using ScyTek IHC reagents and may not be suitable for other detection systems.

Precautions

1. Contains Sodium Azide as a preservative (0.09% w/v), do not ingest. Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.
2. Do not pipette by mouth.
3. Avoid contact of reagents and specimens with skin and mucous membranes.
4. Avoid microbial contamination of reagents or increased nonspecific staining may occur.
5. The user must validate any procedures and recommendations that differ from this data sheet.
6. The SDS may be found at scytek.com


References

1. Skalli O et al. Journal of Cell Biology, 1986, 103:2787-96.
2. De Lisis M, Boppart MD, Huntsman HD, Zachwieja N, Zou K, Ripchik P, Valero MC. Mesenchymal stem cells contribute to vascular growth in. Am J Physiol Heart Circ Physiol. 2013;304:H72-81.
3. Altinay S, Kusaslan R. Gastrointestinal autonomic nerve tumour of jejunum presenting as a perfore mass. JOURNAL OF THE PAKISTAN MEDICAL ASSOCIATION. 2014 Apr 1;64(4):461-4.
4. Pierini A, Cinti F, Binanti D, Pisani G. Primary leiomyosarcoma of the jugular vein in a dog. Open Veterinary Journal. 2017;7(1):61-4.
5. Kiremit MC, Acar Ö, Sağlıcan Y, Esen T. Bilateral renal cell carcinoma with leiomyomatous stroma: A rare entity diagnosed synchronously and treated surgically in a staged fashion. Turkish journal of urology. 2017 Dec;43(4):566.
6. Elmaci İ, Altinoz MA, Ozlu BE, Sari R, Er O, Danyeli AE, Karaarslan E. Benign leiomyoma with multiple metastases to vertebrae and calvarium: An index case with comprehensive review of endocrine targets. Neurosurgical review. 2021 Feb;44(1):289-300.

Warranty

No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. ScyTek Laboratories, Inc. is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

Storage: 2° C  8° C



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