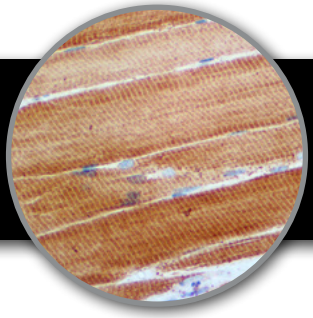
Actin, Muscle Specific

Clone: HHF-35

Mouse Monoclonal

CE IVD



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Inset: IHC of Actin, Muscle Specific on a FFPE Skeletal Muscle Tissue

Intended Use

For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical applications on formalin-fixed paraffin-embedded tissues (FFPE), frozen tissue sections and cell preparations. Interpretation of results should be performed by a qualified medical professional.

Immunogen

SDS extract of human myocardium.

Summary and Explanation

Actin is a globular-structural, 345 kDa protein that polymerizes in a helical fashion to form an actin filament (or microfilament). Actin filaments provide mechanical support for the cell, determine the cell shape, enable cell movements (through lamellipodia, filopodia, or pseudopodia); and participate in certain cell junctions, in cytoplasmic streaming and in contraction of the cell during cytokinesis. In muscle cells they play an essential role, along with myosin, in muscle contraction. In the cytosol, actin is predominantly bound to ATP, but can also bind to ADP.

This antibody recognizes actin of skeletal, cardiac, and smooth-muscle cells. It is not reactive with other mesenchymal cells except for myoepithelium. Muscle-Specific Actin recognizes alpha and gamma isotypes of all muscle groups. Non-muscle cells such as vascular endothelial cells and connective tissues are nonreactive. Neoplastic cells of non-muscle-derived tissue such as Carcinomas, Melanomas and Lymphomas are negative. This antibody is useful in the identification of rhabdoid cellular elements.

Antibody Type	Mouse Monoclonal	**Clone**	HHF-35
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Cytoplasmic	**Control**	Skeletal Muscle, Appendix, Prostate
Species Reactivity		Human, Dog, Cat, Mouse, Rat, Monkey, Rabbit, Chicken, Shrew	

Presentation

Actin, Muscle Specific 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.

Presentations

Catalog Num.	Antibody Type	Dilution	Volume/Qty
BSB 5022	Tinto Prediluted	Ready-to-Use	3.0 mL
BSB 5023	Tinto Prediluted	Ready-to-Use	7.0 mL
BSB 5024	Tinto Prediluted	Ready-to-Use	15.0 mL
BSB 5025	Concentrated	1:50 - 1:200	0.1 mL
BSB 5026	Concentrated	1:50 - 1:200	0.5 mL
BSB 5027	Concentrated	1:50 - 1:200	1.0 mL
BSB 5028	Control Slides	Not Applicable	5 slides

Precautions

1. For professional users only. Ensure results are interpreted by a medical professional.
2. This product contains sodium azide (NaN3), a toxic chemical which may react with plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent sodium azide build-up.
3. Ensure proper handling procedures are used with reagent. Always wear proper laboratory equipment such as laboratory coat and gloves when handling reagents.
4. Unused solution should be disposed of according to local and federal regulations.
5. Do not ingest reagent. If reagent ingested, contact a poison control center immediately.
6. For complete recommendations for handling biological specimens please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (4).

Storage

Store at 2-8 °C. Do not use after expiration date listed on package label. Temperature fluctuations should be avoided. Store appropriately when not in use, and avoid prolonged exposure to room temperature conditions.

Specimen Preparation

Paraffin sections: The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation to ensure best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033) or ImmunoDNA Digestor (BSB 0108-0112). See reverse side for complete protocol. Tissue should remain hydrated via use of Bio SB Immuno/DNA Washer solutions (BSB 0029 & BSB 0042).
Frozen sections and cell preparations: The antibody can be used for labeling acetone-fixed frozen sections and acetone-fixed cell preparations.

Staining Procedure

1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positive charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).
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. TintoRetriever Pressure Cooker or Equivalent

Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA, and place in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 15 minutes. Open and immediately transfer slides to room temperature.

b. TintoRetriever PT Module or Water Bath Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA 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. For manual staining, perform antibody incubation at ambient temperature. For automated staining methods, perform antibody incubation according to instrument manufacturer's instructions.
8. Wash slides with IHC wash buffer or DI water.
9. Continue IHC staining protocol.

Recommended IHC Protocol

Step	ImmunoDetector AP/HRP	PolyDetector AP/HRP	PolyDetector Plus HRP
Peroxidase/AP Blocker	5 min.	5 min.	5 min
Primary Antibody	30-60 min.	30-60 min.	30-60 min.
1st Step Detection	10 min.	30-45 min.	15 min.
2nd Step Detection	10 min.	Not Applicable	15 min.
Substrate-Chromogen	5-10 min.	5-10 min.	5-10 min.
Counterstain	Varies	Varies	Varies

Performance Characteristics

Normal Tissues	
Positive (+)	
Skeletal Muscles	Smooth Muscles of Arteries
Veins & Pericytes of Smaller Arteries	Tunica Muscularis of the GI Tract
Myomentrium of the Uterus	Prostatic Stroma
Capsule cells of several parenchymal organs, including liver, kidney, lymph nodes, & spleen	
Myoepithelia layers of the mammary, ducts, & glands	
Eccrine sweat, bronchial, & salivary glands	
Negative (-)	
Vascular Endothelial Cells	Epithelial Cells
Lymphoid Cells	Macrophages
Connective Tissue	Neural Cells

Abnormal Tissues	
Positive (+)	
Leiomyomas	Leiomyosarcomas
Rhabdomyosarcos	
Negative (-)	
Invasive Breast Tumors	Non-Muslce Sarcomas
Lymphomas	Melanomas
Neoplastic Cells of Carcinomas	

Product Limitations

Due to inherent variability present in immunohistochemical procedures (including fixation time of tissues, dilution factor of antibody, retrieval method utilized and incubation time), optimal performance should be established through the use of positive and negative controls. Results should be interpreted by a medical professional.

References

1. Gown, et al. A. J. P. 1986;125:191
2. Schmidt R., et al. A. J. P. 1988;131:199
3. Azumi N, et al. Modern Pathology. 1988,1:469-474
4. Rangdaeng L, et al. Am J Clin Pathology. 1991;96:32-45
5. Schmidt R, Cone R, Haas J, Gown A, Amer J Pathol. 1988;131:19
6. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012.

Symbol Key / Légende des symboles/Erläuterung der Symbole

EC REP EMERGO EUROPE Prinsessegracht 20 2514 AP The Hague The Netherlands	 Storage Temperature Limites de température Zulässiger Temperaturbereich	 Manufacturer Fabricant Hersteller	REF Catalog Number Référence du catalogue Bestellnummer
IVD In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum	 Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	 Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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