



# Cytokeratin LMW/AE1

*IHC of Cytokeratin LMW/AE1 on an FFPE Prostate Tissue*

**Description** Cytokeratins are intermediate-filament keratins found in the intracytoplasmic cytoskeleton of epithelial tissue. There are two types of cytokeratins: the low-weight, acidic Type I cytokeratins and the high-weight, basic or neutral Type II cytokeratins. Cytokeratins are usually found in pairs comprising a Type I cytokeratin and a Type II cytokeratin. Expression of these cytokeratins is frequently organ or tissue-specific.

Cytokeratin Low Molecular Weight AE1 can recognize most acidic keratins, making it a broadly reactive antibody that stains most epithelia and their neoplasms. Members of the acidic and basic subfamilies are found in pairs. Each epithelium contains at least one acidic and one basic keratin so this antibody can show the distribution of keratin-containing cells in epithelia. Cytokeratin AE1 is particularly suited to distinguish poorly-differentiated Carcinomas from non-epithelial Neoplasms. This marker stains both normal and neoplastic cells of epithelial origin.

<b>Antibody Type</b>	Mouse Monoclonal	<b>Clone</b>	AE1
<b>Isotype</b>	IgG1	<b>Reactivity</b>	Paraffin, Frozen
<b>Localization</b>	Cytoplasmic	<b>Control</b>	Prostate, Salivary Gland
<b>Storage</b>	Store at 2°-8°C	<b>Stability</b>	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** Cytokeratin AE1 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 5435	Prediluted	Ready-To-Use	3.0 ml
	BSB 5436	Prediluted	Ready-To-Use	7.0 ml
	BSB 5437	Prediluted	Ready-To-Use	15.0 ml
	BSB 5438	Concentrated	1:100-1:500	0.1 ml
	BSB 5439	Concentrated	1:100-1:500	0.5 ml
	BSB 5440	Concentrated	1:100-1:500	1.0 ml
	BSB 544β1	Control Slides		5

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

- References**
1. Tyler CR, *Arch Pathol Lab Med.* 1978
  2. Weiss RA, et al. *J Cell Biol.* 1984;98:1397
  3. Swanson PE, et al. *Am J Clin Pathol.* 1991;95:S2-S7
  4. Eusebi V, et al. *Am J Clin Pathol.* 1990;14:737-747

**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

