

P.O. Box 3286 - Logan, Utah 84323, U.S.A. - Tel. (800) 729-8350 – Tel. (435) 755-9848 - Fax (435) 755-0015 - [www.ScyTek.com](http://www.ScyTek.com)

## Cytokeratin, Pan; Clones AE-1 & AE-3

Catalog Number	Format	Volume
A00152-0002	(Ready-To-Use)	2 ml
A00152-0007	(Ready-To-Use)	7 ml
A00152-0025	(Ready-To-Use)	25 ml
A00152-C.1	(Concentrate)	0.1 ml
A00152-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.

### Description

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

Concentrate: Immunohistochemistry (Frozen and Formalin-fixed):	0.5-1 µg/ml
Flow Cytometry:	0.5-1 µg/million cells
Immunofluorescence:	1-2 µg/ml
Western Blotting:	0.5-1 µg/ml

**Species:** Mouse  
**Immunogen:** Human epidermal keratin  
**Clone:** AE-1 & AE-3  
**Isotype:** IgG1, kappa (AE-1); IgG1, kappa (AE-3)

**Mol. Wt. of Antigen:** 40-70 kDa  
**Format:** Ready-To-Use antibody has been pre-titrated 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 200µg/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 cocktail recognizes acidic (Type I or LMW) and basic (Type II or HMW) cytokeratins, which include 67kDa (CK1); 64kDa (CK3); 59kDa (CK4); 58kDa (CK5); 56kDa (CK6); 52kDa (CK8); 56.5kDa (CK10); 50kDa (CK14); 50kDa (CK15); 48kDa (CK16); 40kDa (CK19). This antibody stains cytokeratins present in normal and abnormal human tissues and has shown high sensitivity in the recognition of epithelial cells and carcinomas.

**Background:** Twenty human keratins are resolved with two-dimensional gel electrophoresis into acidic (pI <5.7) and basic (pI >6.0) subfamilies. Many studies have shown the usefulness of keratins as markers in cancer research and tumor diagnosis. AE-1 & AE-3 is a broad spectrum anti pan-cytokeratin antibody cocktail which differentiates epithelial tumors from non-epithelial tumors, e.g. squamous vs. adenocarcinoma of the lung, liver carcinoma, breast cancer, and esophageal cancer. It has been used to characterize the source of various neoplasms and study the distribution of cytokeratin-containing cells in epithelia during normal development and during the development of epithelial neoplasms.

**Species Reactivity:** Human, Monkey, Cow, Dog, Rabbit, Mouse, Rat, Chicken. Others not known.

**Positive Control:** Skin, Adeno- or Squamous carcinomas.

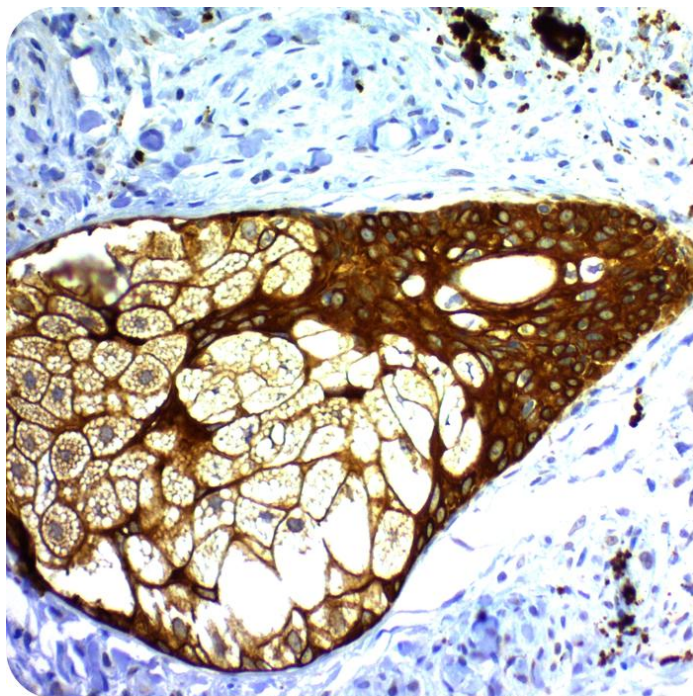
**Cellular Localization:** Cytoplasmic

**Microbiological State:** Nonsterile

### 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](http://scytek.com).




Human skin stained with Cytokeratin, Pan; Clones AE1 & AE3 using UltraTek HRP and DAB Chromogen. Original magnification: 200X

### Procedure

- Tissue Section Pretreatment (Highly Recommended):** Staining of formalin fixed paraffin embedded tissue sections is significantly enhanced by pretreatment with Tis-EDTA HIER Solution (10x) pH 9.0 (ScyTek catalog# TES500) or Citrate Plus (10x) HIER Solution (ScyTek catalog# CPL500)

Storage: 2° C  8° C

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**2. 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.

**3. 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.

#### **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](http://scytek.com)


#### **References**

1. Woodcock-Mitchell J et. al. Journal of Cell Biology 1982;95:580-8.
2. Tseng SCG et. al. Cell 1982; 30361.

#### **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.

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