

## CD56; Clone 123C3.D5 Monoclonal Mouse Antibody

Catalog Number	Volume
A00121-0002 (Ready-to-Use)	2 ml
A00121-0007 (Ready-to-Use)	7 ml
A00121-0025 (Ready-to-Use)	25 ml
A00121-C (Concentrate)	1 ml
A00121-C.1 (Concentrate)	0.1 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.

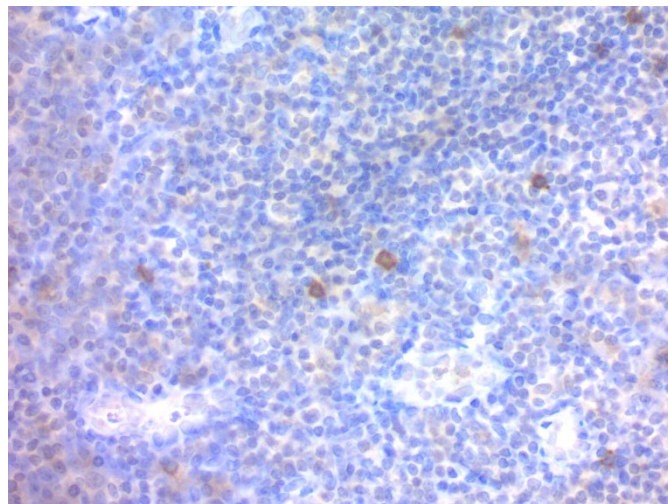
### Description

**Titer/ Working Dilution:** For Ready-to-Use no further dilution is required.  
For Concentrates suggested dilution is 1:50-1:100

**Species:** Mouse  
**Isotype:** Mouse IgG1, Kappa  
**Immunogen:** The immunogen for this CD56 antibody was a membrane preparation of a small cell lung carcinoma..  
**Clone:** 123C3.D5  
**Format:** This antibody is provided in a phosphate buffered saline containing 1% BSA.  
**Specificity:** This antibody recognizes two proteins (185kDa & 145kDa), identified as two isoforms of neural cell adhesion molecule (NCAM/CD56). It is used as a tumor marker in various cancers such as NK lymphomas and Merkel cell carcinoma. NCAM is expressed on most neuroectodermal derived lines, tissues, and neoplasms such as retinoblastoma, medulloblastoma, astrocytoma, and neuroblastoma. It is also expressed on some mesodermally derived tumors such as rhabdomyosarcoma and also on natural killer cells.

**Background:** CD56, a 175-220kDa glycoprotein, is a member of the Ig super family. It is expressed as three major isoforms and consists of five Ig-like domains and two Fibronectin-type III domains in the extracellular region. The 135kDa isoform is the basic molecule which is glycosylated or sialylated to produce the mature species. CD56 is widely expressed in nervous system, on NK cells and a specific set of Tcells. CD56+ NK cells and Tcells are unique in their ability to mediate cell-mediated cytotoxicity against certain tumor cell targets without MHC restriction. Other physiological functions of CD56 include mediating cell adhesion through homophilic and heterophilic interaction and activating intracellular signaling pathways resulting in neurite extension and fasciculation, migration and synapses formation in brain. CD56 is also vital for neuronal development and plasticity in adult brain.

**Species Reactivity:** Human.  
**Positive Control:** Tonsil, Neuroblastoma, Pancreatic Islet cells.  
**Cellular Localization:** Cytoplasmic & Cell Membrane.  
**Microbiological State:** This product is not steri



### Procedure

- Tissue Section Pretreatment (Recommended):** Staining of formalin fixed, paraffin embedded tissue sections is enhanced by pretreatment with pH 8-9 HIER Solution (see ScyTek catalog# ETA or TES for instructions).
- 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# ABZ008, see IFU for instructions), combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

### Materials and Reagents Required but not Provided

- Control tissue and reagents
- Xylene, graded alcohols, and deionized/distilled water
- IHC detection system (Suggested: ScyTek Cat# UHP500 and ACV500)
- Wash buffer for rinses (ScyTek Cat# TBT500)
- Retrieval solution (ScyTek Cat# ETA, TES)
- 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).

### 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.

Storage: 2° C



8° C



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EC REP


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**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**

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2. Schol DJ; Mooi WJ; van der Gugten AA; Wagenaar SS; Hilgers J. International Journal of Cancer. Supplement, 1988, 2:34-40.
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4. Brezicka FT; Olling S; Bergman B; Berggren H; Engstrom CP; Holmgren J; Larsson S; Lindholm L. Apmis, 1991 Sep, 99(9):797-802.
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6. Komminoth P; Roth J; Saremaslani P; Matias-Guiu X; Wolfe HJ; Heitz PU. American Journal of Surgical Pathology, 1994, 18(4):399-411.
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8. Scheidegger EP; Lackie PM; Papay J; Roth J. Laboratory Investigation, 1994, 70:95-106.

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