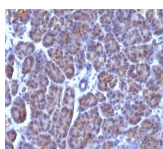


# Nuclear Membrane Monoclonal Mouse Antibody (AE-5)



## Product Description

This monoclonal antibody is part of a new panel of reagents, which recognizes subcellular organelles or compartments of human cells. These markers may be useful in identification of these organelles in cells, tissues, and biochemical preparations. It recognizes an antigen associated with the nuclear membrane expressed in human cells. It can be used to stain the nuclear membrane in cell or tissue preparations and can be used as a marker of the nuclear membrane in subcellular fractions. It produces a ring pattern around the nucleus of cells of normal and malignant cells and may be used to stain the nuclear membrane of cells in fixed or frozen tissue sections. It can be used with paraformaldehyde fixed frozen tissue or cell preparations and formalin fixed, paraffin-embedded tissue sections. The nuclear envelope (also known as the perinuclear envelope, nuclear membrane, nucleolemma or karyotheca) is the double membrane of the nucleus that encloses genetic material in eukaryotic cells. It separates the contents of the nucleus (DNA in particular) from the cytosol (cytoplasm). Numerous nuclear pores are present on the nuclear envelope to facilitate and regulate the exchange of materials (for example, proteins and RNA) between the nucleus and the cytoplasm. The space between the two membranes that make up the nuclear envelope is called the perinuclear space (also called the perinuclear cisterna), and is usually about 20 – 40 nm wide. Each of the two membranes is composed of a lipid bilayer. The outer membrane is continuous with the rough endoplasmic reticulum. The inner membrane is erected upon the nuclear lamina, a network of intermediate filaments made of lamin, that plays a role in mitosis and meiosis. The type of lamins present are A, B1, B2, and C. The nuclear envelope may also play a role in the disposition of chromatin inside the nucleus. The lamina acts as a site of attachment for chromosomes. It also acts like a shield for the nucleus. During prophase in mitosis, the chromatids begin condensing to form chromosomes, and the nuclear envelope begins to disintegrate. During metaphase, the nuclear envelope is completely disintegrated, and the chromosomes can be pulled apart as chromatids by the spindle fibers.

Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the [CF® Dye Brochure](#) for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors.

**Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email [order@biotium.com](mailto:order@biotium.com) to inquire about stock status and lead times before placing your order.

**Catalog number key for antibody number 0867, Anti-Nuclear Membrane (AE-5)**

Antibody # prefix	Conjugation	Ex/Em (nm)	Laser line	Detection channel	Dye Features
BNC04	CF®405S	404/431	405	DAPI (microscopy), AF405	<a href="#">CF®405S Features</a>
BNC88	CF®488A	490/515	488	GFP, FITC	<a href="#">CF®488A Features</a>
BNC68	CF®568	562/583	532, 561	RFP, TRITC	<a href="#">CF®568 Features</a>
BNC94	CF®594	593/614	561	Texas Red®	<a href="#">CF®594 Features</a>
BNC40	CF®640R	642/662	633-640	Cy®5	<a href="#">CF®640R Features</a>
BNC47	CF®647	650/665	633-640	Cy®5	<a href="#">CF®647 Features</a>
BNC74	CF®740	742/767	633-685	775/50	<a href="#">CF®740 Features</a>
BNCB	Biotin	N/A	N/A	N/A	
BNUB	Purified	N/A	N/A	N/A	
BNUM	Purified, BSA-free	N/A	N/A	N/A	

Alexa Fluor, Pacific Blue, Pacific Orange, and Texas Red are trademarks or registered trademarks of Thermo Fisher Scientific; Cy is a registered trademark of Cytiva; IRDye, LI-COR, and Odyssey are registered trademarks of LI-COR Bioscience.

## References

Note: References for this clone sold by other suppliers may be listed for expected applications.

J Biol Chem (1997) 272(43): 27107-27115. (IF)

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Product link: <https://biotium.com/product/monoclonal-anti-nuclear-membrane-ae-5/>

## Product attributes

Antibody number	#0867
Antibody reactivity (target)	Nuclear Membrane
Antibody type	Primary
Host species	Mouse
Clonality	Monoclonal
Clone	AE-5
Isotype	IgG1, kappa
Molecular weight	Not Known
Synonyms	Not Known
Entrez gene ID	Not Known
SwissProt	Not Known
Unigene	Not Known
Immunogen	Nuclei of myeloid leukemia biopsy cells
Antibody target cellular localization	Nuclear membrane
Expected antibody applications	IF (published for clone)
Species reactivity	Human
Antibody application notes	Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody. Immunocytochemistry acetone-fixed cells 0.5-1.0 ug/mL, Immunofluorescence 0.5-1.0 ug/mL, Optimal dilution for a specific application should be determined by user
Positive control	Tonsil
Shipping condition	Room temperature
Storage Conditions	Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended
Regulatory status	For research use only (RUO)
Antibody/conjugate formulation	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide
Antibody research areas	Organelle markers
Product origin	Product may contain either bovine serum albumin (BSA) from bovine serum (Bos taurus), or recombinant BSA produced in Chinese hamster ovary cells. Inquire for the specific lot.