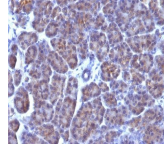


Nuclear Membrane Monoclonal Mouse Antibody (AE-5)



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 to inquire about stock status and lead times before placing your order. **Catalog number key for antibody number 0867, Anti-Nuclear Membrane (AE-5)**

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)

| Antibody # prefix | Conjugation | Ex/Em (nm) | Laser line | Detection channel | Dye Features |
|-------------------|--------------------|------------|------------|--------------------------|----------------------------------|
| BNC04 | CF®405S | 404/431 | 405 | DAPI (microscopy), AF405 | CF®405S Features |
| BNC88 | CF®488A | 490/515 | 488 | GFP, FITC | CF®488A Features |
| BNC68 | CF®568 | 562/583 | 532, 561 | RFP, TRITC | CF®568 Features |
| BNC94 | CF®594 | 593/614 | 561 | Texas Red® | CF®594 Features |
| BNC40 | CF®640R | 642/662 | 633-640 | Cy®5 | CF®640R Features |
| BNC47 | CF®647 | 650/665 | 633-640 | Cy®5 | CF®647 Features |
| 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 | |

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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 |