



## MONOCLONAL ANTIBODY

*For research use only. Not for clinical diagnosis.*

**Catalog No. 70-305EX**

### Anti-Nup62 antibody, rat monoclonal (2A)

The nuclear pore complex (NPC) regulates cargo transport between the cytoplasm and the nucleus. **Nucleoporins** are the main components of the NPC in eukaryotic cells. **Nup (Nucleoporin) 62** (522 aa, 53 kDa) is a member of the FG-repeat containing nucleoporins and is localized to the NPC central plug. **Nup62** associates with the importin alpha/beta complex which is involved in the import of proteins containing nuclear localization signals. Predicted to contain about 10 N-acetylglucosamine side chain .

#### Applications

1. Western blotting (1/500 ~1/2,000 dilution)
2. Immunoprecipitation (assay dependent)
3. Immunofluorescence / Immunocytochemistry (1/400)
4. ELISA (assay dependent)
5. When this antibody was micro-injected into the cytoplasm of the HeLa cells, it accumulates into the nuclear pores as examined by immunofluorescence staining..

**Immunogen:** Recombinant human Nup62 (aa 1-300) (GST-Nup62-His)

**Epitope:** aa 1-179 (FG-repeat region)

**Isotype:** Rat IgG1 kappa

**Product:** Purified from serum-free culture medium of the hybridoma by proprietary chromatography under mild conditions.

**Form:** 1mg/ml in PBS, 50% glycerol, filter-sterilized. Carrier protein and sodium azide.free.

**Specificity:** Specific to human (HeLa cells) and simian (Cos cells). The antibody did not react with mouse.

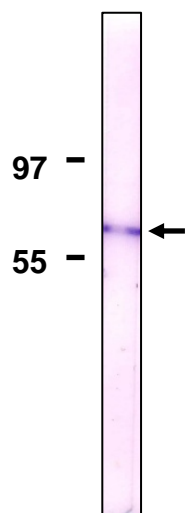
**Size:** 200 ug

**Storage:** Shipped at 4°C, and upon arrival, spin-down and store at -20°C

**Data Link:** UniProtKB/Swiss-Prot [P37198](#) (NUP62\_HUMAN)

**References:** This antibody was described in Ref.1 and used in Ref.1 and 2.

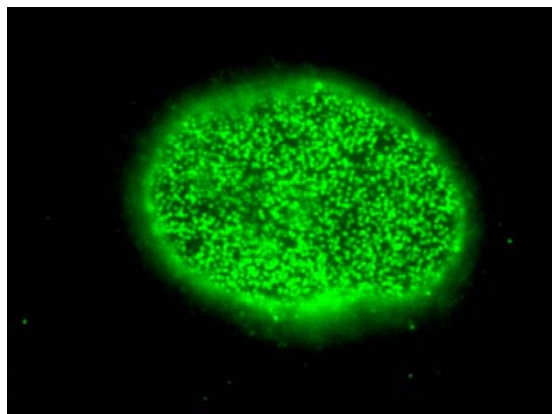
1. Fukuhara T *et al* "Functional analysis of nuclear pore complex protein Nup62/p62 using monoclonal antibodies." *Hybridoma* **25**: 51-59 (2006) PMID [16704304](#)
2. Maeshima K *et al* "Cell-cycle-dependent dynamics of nuclear pores: pore-free islands and lamins." *J Cell Sci* **119**: 4442-4451 (2006) PMID [17074834](#)



**Fig.1 Detection of Nup62 in membrane fraction of HeLa cells by Western blotting with the antibody 2A.**

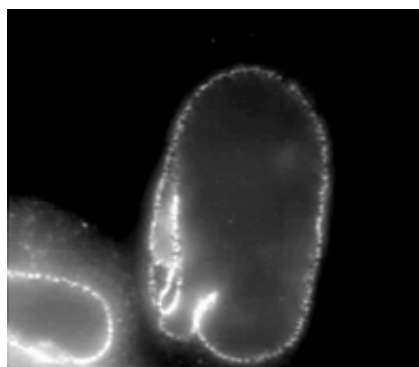
Sample is the nuclear membrane fraction of HeLa cells. The antibody was used at 1/500 dilution. As a second antibody, alkaline phosphatase conjugated anti-rat IgG antibody was used

The protein migrates at 60 kDa position.



**Fig.2 Immunofluorescent staining of HeLa cells with the antibody 2A, focused on nuclear surface.**

HeLa cells were fixed with 3.7% formaldehyde and permeabilized with 0.5% Triton X-100. The anti-Nup62 antibody (2A) was used at 1/400 and as a second antibody, Alexa 488 conjugated goat anti-rat IgG antibody was used at 1/500 dilution.



**Fig.3. Immunofluorescent staining of HeLa cells with the antibody 2A, focused on nuclear rim.**

Methods are as described in Fig.2.

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