# Anti-SUN2 Antibody [JG39-52]

## ET7108-92

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| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human, Mouse, Rat |
| **Applications:** | WB, IHC-P, FC, IF-Cell, IF-Tissue |
| **Molecular Wt:** | Predicted band size: 80 kDa |
| **Clone number:** | JG39-52 |

**Description:** SUN2 (sad1/unc-84 protein-like 2), also known as UNC84B (unc-84 homolog B), FRIGG, KIAA0668 or RAB5IP, is a 717 amino acid single-pass membrane protein that contains one SUN domain and localizes to the membrane of both the nucleus and the endosome. Widely expressed in a variety of tissues, including lung, muscle and heart, SUN2 interacts with Rab 5A and may play a role in homotypic endosome fusion. The gene encoding SUN2 maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia. Additionally, translocations between chromosomes 9 and 22 may lead to the formation of the Philadelphia Chromosome and the subsequent production of the novel fusion protein BCR-Abl, a potent cell proliferation activator found in several types of leukemias.

**Immunogen:** Recombinant protein within Human SUN2 aa 591-717 / 717.

**Positive control:** Saos-2 cell lysate, HeLa cell lysate, HepG2 cell lysate, A431 cell lysate, A431, human testis tissue, mouse testis tissue, rat testis tissue.

**Subcellular location:** Endosome. Nucleus inner membrane.

**Database links:** SwissProt: Q9UH99 Human | Q8BJS4 Mouse

**Recommended Dilutions:**

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| **WB** | 1:2,000 |
| **IHC-P** | 1:1,000 |
| **FC** | 1:1,000 |
| **IF-Cell** | 1:50-1:100 |
| **IF-Tissue** | 1:50-1:200 |

**Storage Buffer:** 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

## Images

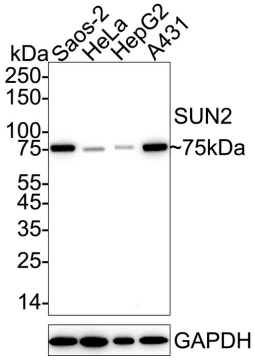


**Fig1:** Western blot analysis of SUN2 on different lysates with Rabbit anti-SUN2 antibody (ET7108-92) at 1/2,000 dilution.

Lane 1: Saos-2 cell lysate
Lane 2: HeLa cell lysate
Lane 3: HepG2 cell lysate
Lane 4: A431 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 80 kDa
Observed band size: 75 kDa

Exposure time: 30 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET7108-92) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

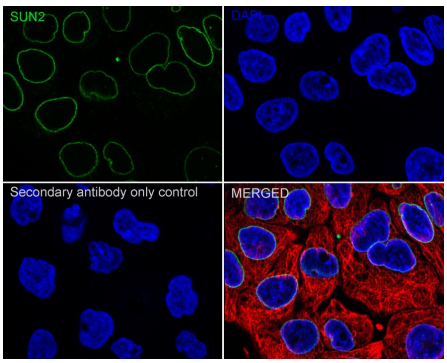


**Fig2:** Immunocytochemistry analysis of A431 cells labeling SUN2 with Rabbit anti-SUN2 antibody (ET7108-92) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-SUN2 antibody (ET7108-92) at 1/50 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

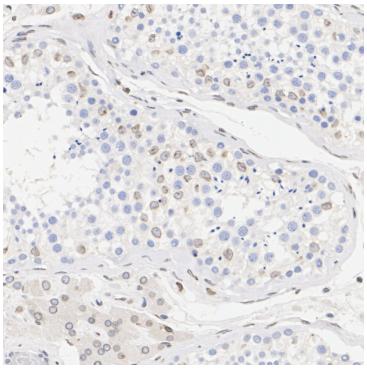

**Fig3:** Immunohistochemical analysis of paraffin-embedded human testis tissue with Rabbit anti-SUN2 antibody (ET7108-92) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (ET7108-92) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

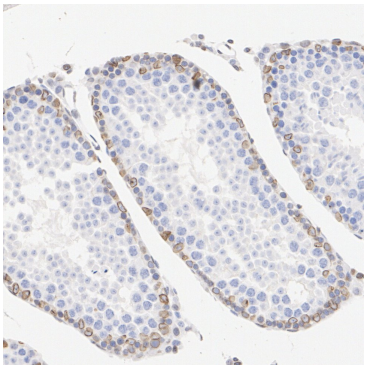

**Fig4:** Immunohistochemical analysis of paraffin-embedded mouse testis tissue with Rabbit anti-SUN2 antibody (ET7108-92) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (ET7108-92) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

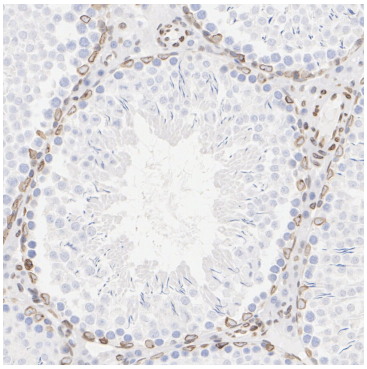

**Fig5:** Immunohistochemical analysis of paraffin-embedded rat testis tissue with Rabbit anti-SUN2 antibody (ET7108-92) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (ET7108-92) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

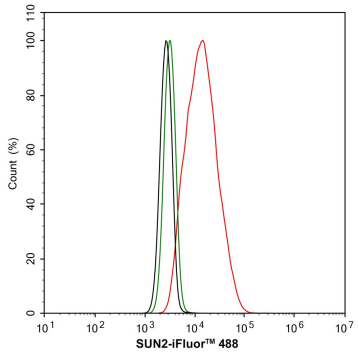


**Fig6:** Flow cytometric analysis of A431 cells labeling SUN2.

Cells were fixed and permeabilized. Then stained with the primary antibody (ET7108-92, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## Background References

1. Hodzic D M et al. Sun2 is a novel mammalian inner nuclear membrane protein. J Biol Chem 279:25805-25812 (2004).
2. Wang Q et al. Characterization of the structures involved in localization of the SUN proteins to the nuclear envelope and the centrosome. DNA Cell Biol 25:554-562 (2006).