

SUN2 Rabbit mAb

Catalog # AP78075

Product Information

Application	WB, IHC-P, FC
Primary Accession	Q9UH99
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Chromatography
Calculated MW	80311

Additional Information

Gene ID	25777
Other Names	SUN2
Dilution	WB~~1:1000 IHC-P~~N/A FC~~1:10~50
Format	Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	SUN2 (HGNC:14210)
Function	As a component of the LINC (Linker of Nucleoskeleton and Cytoskeleton) complex, involved in the connection between the nuclear lamina and the cytoskeleton. The nucleocytoplasmic interactions established by the LINC complex play an important role in the transmission of mechanical forces across the nuclear envelope and in nuclear movement and positioning. Specifically, SYNE2 and SUN2 assemble in arrays of transmembrane actin-associated nuclear (TAN) lines which are bound to F-actin cables and couple the nucleus to retrograde actin flow during actin-dependent nuclear movement. Required for interkinetic nuclear migration (INM) and essential for nucleokinesis and centrosome- nucleus coupling during radial neuronal migration in the cerebral cortex and during glial migration. Required for nuclear migration in retinal photoreceptor progenitors implicating association with cytoplasmic dynein-dynactin and kinesin motor complexes, and probably B-type lamins; SUN1 and SUN2 seem to act redundantly. The SUN1/2:KASH5 LINC complex couples telomeres to microtubules during meiosis; SUN1 and

SUN2 seem to act at least partial redundantly. Anchors chromosome movement in the prophase of meiosis and is involved in selective gene expression of coding and non-coding RNAs needed for gametogenesis. Required for telomere attachment to nuclear envelope and gametogenesis. May also function on endocytic vesicles as a receptor for RAB5-GDP and participate in the activation of RAB5.

Cellular Location

Nucleus inner membrane; Single-pass type II membrane protein. Nucleus envelope. Endosome membrane; Single-pass type II membrane protein

Tissue Location

Widely expressed. Highly expressed in heart, lung and muscle. Weakly expressed in fetal heart. Slightly overexpressed in some heart tissues form patients with congenital heart defects

Background

SUN proteins form part of the LINC complex - a protein bridge that spans the nuclear envelope linking the nucleoskeleton to the actin cytoskeleton. They are located on the inner nuclear membrane side of the complex.

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