

FUNDC1 Rabbit pAb

Catalog # AP96236

Product Information

Application	WB
Primary Accession	Q9DB70
Other Accession	Q9DB70
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	17159
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse FUNDC1
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Mitochondrion outer membrane; Multi-pass membrane protein.
SIMILARITY	Belongs to the FUN14 family.
SUBUNIT	Interacts (via YXXL motif) with MAP1 LC3 family proteins MAP1LC3A, MAP1LC3B and GABARAP.
Post-translational modifications	Phosphorylation at Tyr-18 by SRC inhibits activation of mitophagy. Following hypoxia, dephosphorylated at Tyr-18, leading to interaction with MAP1 LC3 family proteins and triggering mitophagy.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	FUNDC1 is a 155 amino acid protein belonging to the FUN14 family. The gene encoding FUNDC1 maps to human chromosome Xp11.3 and mouse chromosome X A1.2. The X and Y chromosomes are the human sex chromosomes. Chromosome X consists of about 153 million base pairs and nearly 1,000 genes. The combination of an X and Y chromosome lead to normal male development while two copies of X lead to normal female development. More than one copy of the X chromosome with a Y chromosome causes Klinefelter's syndrome. A single copy of X alone leads to Turner's syndrome. More than 2 copies of the X chromosome, in the absence of a Y chromosome, is known as Triple X syndrome. Color blindness, hemophilia, and Duchenne muscular dystrophy are well known X chromosome-linked conditions which affect males more frequently as males carry a single X chromosome.

Additional Information

Gene ID	72018
Other Names	1500005J14Rik; 1810033P05Rik; FUND1_HUMAN; FUNDC1; FUND1_MOUSE; FUND1_RAT; FUN14 domain containing 1
Target/Specificity	Widely expressed.

Dilution	WB=1:300-800
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Fundc1
Function	Integral mitochondrial outer-membrane protein that mediates the formation of mitochondria-associated endoplasmic reticulum membranes (MAMs). In turn, mediates angiogenesis and neoangiogenesis through interference with intracellular Ca(2+) communication and regulation of the vascular endothelial growth factor receptor KDR/VEGFR2 expression at both mRNA and protein levels. Also acts as an activator of hypoxia-induced mitophagy, an important mechanism for mitochondrial quality and homeostasis, by interacting with and recruiting LC3 protein family to mitochondria. Mechanistically, recruits DRP1 at ER-mitochondria contact sites leading to DRP1 oligomerization and GTPase activity to facilitate mitochondrial fission during hypoxia (By similarity). Additionally, plays a role in hepatic ferroptosis by interacting directly with glutathione peroxidase/GPX4 to facilitate its recruitment into mitochondria through TOM/TIM complex where it is degraded by mitophagy (PubMed: 36828120).
Cellular Location	Mitochondrion outer membrane {ECO:0000250 UniProtKB:Q8IVP5}; Multi-pass membrane protein {ECO:0000250 UniProtKB:Q8IVP5}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.