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EFHA2 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI13855

Product Information

Application	WB
Primary Accession	Q86XE3
Other Accession	NM_181723, NP_859074
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Dog, Bovine
Predicted	Human, Mouse, Rabbit, Pig, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60711

Additional Information

Gene ID	286097
Alias Symbol	DKFZp313A0139, EFHA2
Other Names	Calcium uptake protein 3, mitochondrial, EF-hand domain-containing family member A2, MICU3, EFHA2
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-EFHA2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	EFHA2 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

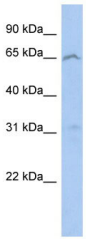
Name	MICU3 {ECO:0000303|PubMed:30699349, ECO:0000312|HGNC:HGNC:27820}
Function	Tissue-specific calcium sensor of the mitochondrial calcium uniporter (MCU) channel, which specifically regulates MCU channel activity in the central nervous system and skeletal muscle (PubMed:29725115). Senses calcium level via its EF-hand domains: compared to MICU1 and MICU2, MICU3 has a higher affinity for calcium (PubMed:29725115). MICU1 and MICU3 form a disulfide-linked heterodimer that stimulates and inhibits MCU activity, depending on the concentration of calcium (PubMed:29725115). At low calcium levels, MICU1 occludes the pore of the MCU channel, preventing mitochondrial calcium uptake (PubMed:29725115). At higher calcium levels,

	calcium- binding to MICU1 and MICU3 induces a conformational change that weakens MCU-MICU1 interactions and moves the MICU1-MICU3 heterodimer away from the pore, allowing calcium permeation through the MCU channel (PubMed:29725115). The high calcium affinity of MICU3 lowers the calcium threshold necessary for calcium permeation through the MCU channel (PubMed:29725115). The MICU1-MICU3 heterodimer promotes flexibility of neurotransmission in neuronal cells by enhancing mitochondrial calcium uptake in presynapses (PubMed:29725115). It is also required to increase mitochondrial calcium uptake in skeletal muscle cells, thereby increasing ATP production (By similarity).
Cellular Location	Mitochondrion intermembrane space {ECO:0000250|UniProtKB:Q8IYU8}. Mitochondrion inner membrane {ECO:0000250|UniProtKB:Q8IYU8}. Note=Recruited to the mitochondrial inner membrane via its association with the uniplex complex {ECO:0000250|UniProtKB:Q8IYU8}
Tissue Location	Specifically expressed in the central nervous system and skeletal muscle.

References

Nusbaum C.,et al.Nature 439:331-335(2006).

Images



WB Suggested Anti-EFHA2 Antibody Titration: 0.2-1 µg/ml
ELISA Titer: 1:1562500
Positive Control: 293T cell lysate