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# EFHA2 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI13855

## Product Information

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| **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

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| **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

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| **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, |

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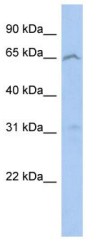
| | calcium- binding to MICU1 and MICU3 induces a conformational change that weakens MCU-MICU1 interactions and moves the MICU1-MICU3 heterodimer away from the pore, allowing calcium permeation through the MCU channel (PubMed:29725115). The high calcium affinity of MICU3 lowers the calcium threshold 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