

# EFHA2 antibody - N-terminal region

Rabbit Polyclonal Antibody

Catalog # AI13854

## Product Information

|                   |                                                       |
|-------------------|-------------------------------------------------------|
| Application       | WB                                                    |
| Primary Accession | <a href="#">Q86XE3</a>                                |
| Other Accession   | <a href="#">NM_181723</a> , <a href="#">NP_859074</a> |
| Reactivity        | Human, Rabbit, Pig, Dog, Horse, Bovine, Yeast         |
| Predicted         | Human, Rabbit, Pig, Horse, 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: <a href="#">29725115</a> ). Senses calcium level via its EF-hand domains: compared to MICU1 and MICU2, MICU3 has a higher affinity for calcium (PubMed: <a href="#">29725115</a> ). MICU1 and MICU3 form a disulfide-linked heterodimer that stimulates and inhibits MCU activity, depending on the concentration of calcium (PubMed: <a href="#">29725115</a> ). At low calcium levels, MICU1 occludes the pore of the MCU channel, preventing mitochondrial calcium uptake (PubMed: <a href="#">29725115</a> ). 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.

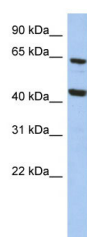
## References

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

## Images

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WB Suggested Anti-EFHA2 Antibody Titration: 0.2-1 µg/ml  
ELISA Titer: 1:312500  
Positive Control: HepG2 cell lysate

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