

EFHA2 antibody - N-terminal region
Rabbit Polyclonal Antibody
Catalog # AI13854**Specification**

EFHA2 antibody - N-terminal region - Product Information

Application	WB
Primary Accession	Q86XE3
Other Accession	NM_181723 , NP_859074
Reactivity	Human, Rabbit, Pig, Horse, Yeast, Bovine, Dog
Predicted Host	Human, Rabbit, Pig, Horse, Bovine
Clonality	Rabbit
Calculated MW	Polyclonal 61kDa KDa

EFHA2 antibody - N-terminal region - 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.

EFHA2 antibody - N-terminal region - 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).

href="http://www.uniprot.org/citations/29725115" target="_blank">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

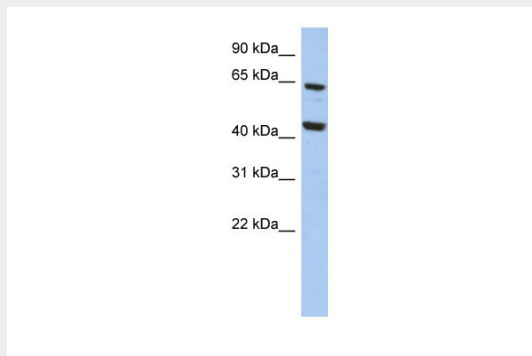
Specifically expressed in the central nervous system and skeletal muscle.

EFHA2 antibody - N-terminal region - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

EFHA2 antibody - N-terminal region - Images



WB Suggested Anti-EFHA2 Antibody Titration: 0.2-1 µg/ml

ELISA Titer: 1:312500

Positive Control: HepG2 cell lysate

EFHA2 antibody - N-terminal region - References

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