

EFCAB4B Antibody

Catalog # ASC11232

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9BSW2
Other Accession	NP_116069 , 14249254
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	83193
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	EFCAB4B antibody can be used for detection of EFCAB4B by Western blot at 1 μ g/mL. Antibody can also be used for immunohistochemistry starting at 10 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	84766
Other Names	EF-hand calcium-binding domain-containing protein 4B, Calcium release-activated calcium channel regulator 2A, CRAC channel regulator 2A, Calcium release-activated channel regulator 2A, CRACR2A, EFCAB4B
Target/Specificity	EFCAB4B;
Reconstitution & Storage	EFCAB4B antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	EFCAB4B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CRACR2A (HGNC:28657)
Function	[Isoform 1]: Ca(2+)-binding protein that plays a key role in store-operated Ca(2+) entry (SOCE) in T-cells by regulating CRAC channel activation. Acts as a cytoplasmic calcium-sensor that facilitates the clustering of ORAI1 and STIM1 at the junctional regions between the plasma membrane and the endoplasmic reticulum upon low Ca(2+) concentration. It thereby regulates CRAC channel activation, including translocation and clustering of ORAI1 and STIM1. Upon increase of cytoplasmic Ca(2+) resulting from opening of CRAC channels, dissociates from ORAI1 and STIM1, thereby destabilizing the

ORAI1-STIM1 complex.

Cellular Location

[Isoform 1]: Cytoplasm

Tissue Location

[Isoform 1]: Expressed in the Jurkat T-cell line.

Background

EFCAB4B Antibody: EFCAB4B, also known as Calcium release-activated calcium channel regulator 2A, is a novel Ca²⁺-binding EF-hand protein that is thought to play a key role in store-operated Ca²⁺ entry in T-cells by regulating CRAC channel activation. EFCAB4B acts as a cytoplasmic calcium-sensor that forms a complex with ORAI1 and STIM1 at the junctional regions between the plasma membrane and the endoplasmic reticulum upon low Ca²⁺ concentration. A closely related protein, EFCAB4A, is likely to play a similar role as EFCAB4B, but the detailed function of EFCAB4A is still under investigation.

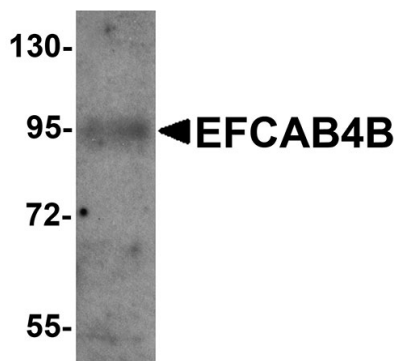
References

Srikanth S, Jung HJ, Kim KD, et al. A novel EF-hand protein, CRACR2A, is a cytosolic Ca²⁺ sensor that stabilizes CRAC channels in T cells. *Nat. Cell. Biol.* 2010; 12:436-46.

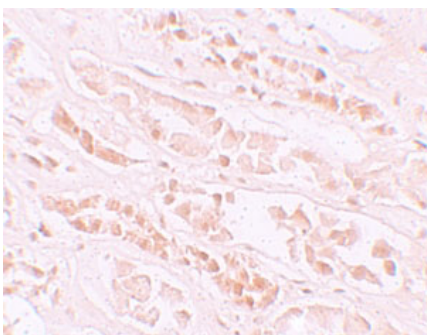
Srikanth S, Jung HJ, Ribalet B, et al. The intracellular loop of Orai1 plays a central role in fast inactivation of Ca²⁺ release-activated Ca²⁺ channels. *J. Biol. Chem.* 2010; 285:5066-75.

Maruyama K, Mikawa T, and Ebashi S. Detection of calcium binding proteins by ⁴⁵Ca autoradiography on nitrocellulose membrane after sodium dodecyl sulfate gel electrophoresis. *J. Biochem.* 1984; 95:511-9.

Images

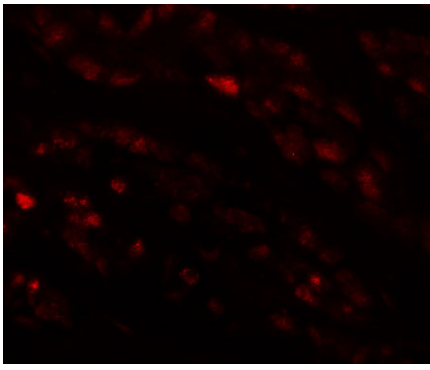


Western blot analysis of EFCAB4B in mouse kidney tissue lysate with EFCAB4B antibody at 1 µg/mL.



Immunohistochemistry of EFCAB4B in human kidney tissue with EFCAB4B antibody at 10 µg/mL.

Immunofluorescence of EFCAB4B in human kidney tissue with EFCAB4B antibody at 20 µg/mL.



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