

Product datasheet for RC219097

EFCAB4B (CRACR2A) (NM_032680) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	EFCAB4B (CRACR2A) (NM_032680) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	EFCAB4B
Synonyms:	EFCAB4B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC219097 representing NM_032680 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGGCTGCCCTGACGGGAGGGTAGTCTCCAGACCCCAGAGACTTGGTCAGGGGTCTGGCCAGGGGCCAA
 AGGGGAGTGGAGCCTGCCTGCATCCCCTGGACAGCCTGGAGCAGAAGGAGACTCAGGAGCAAACGTCGGG
 CCAGCTAGTCATGCTGAGGAAGGCACAGGAGTTCTTTCAGACCTGTGATGCTGAAGGCAAGGGCTTCATC
 GCCAGGAAGGATATGCAGAGGCTGCATAAGGAGCTACCGCTCAGCCTGGAGGAAGTGGAGGATGTGTTTG
 ATGCCCTGGATGCTGATGGCAATGGCTATCTGACCCACAGGAGTTCACTACTGGATTTAGTCACCTTCTT
 CTTTCAGCCAGAATAACCCAAGTCAGGAAGATGCAGGTGAACAGGTGGCCAGCGCCATGAAGAGAAGGTG
 TATCTGTCCAGAGGGGATGAGGATCTGGGCGACATGGGCGAAGATGAGGAAGCCAGTTCGGGATGCTGA
 TGGACAGACTTGGAGCCCAAGGTGTTGGAAGATGAAAGTGATGTCAAGCAGCTCTGGTTGCAGCTGAA
 GAAGGAGGAACCTCATTTACTGTCCAACCTTGAAGACTTCTGACCAGAAATCATCTCCAGCTCCAAGAA
 GCCCATGAGGAGAAGATGAAGTGGAGTGTGCCCTAAAAGGAAAATTGCTGCTTATGATGAAGAAATCC
 AGCATCTCTATGAGGAGATGGAACAACAAATCAAAAGTGAGAAGGAGCAGTTTCTCTGAAGGACACAGA
 GAGGTTTCAAGCCCGCAGTCAAGAGCTGGAGCAGAAACTGTTATGTAAGGAGCAGGAGCTGGAGCAGCTC
 ACCCAGAAGCAGAAAAGGCTGGAAGGTCAAGTGCACAGCCCTGCATCATGACAAGCATGAGACCAAGGCTG
 AGAATACCAAGCTGAAACTCACTAACCAGGAGCTGGCCCGGAGCTGGAGCGGACTTCTGGGAGCTCCA
 GGATGCTCAGCAGAGTTGGAAGCCTCCAGCAAGAGGCTGCAAACTCCACCAAGAGAAGGAGATGGAA
 GTGTACCGTGTGACGGAGAGTCTACAGCGTGAGAAGGCCGGGCTCCTCAAGCAGCTGGATTTCTAAGGT
 GCGTCGGTGGGCACTGGCCTGTGCTGAGAGCACCTCCCAGAAGCCTGGGGTCGGAAGGACCAGTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA


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Protein Sequence: >RC219097 representing NM_032680
 Red=Cloning site Green=Tags(s)

MAAPDGRVVSRPQRLGQSGSGQPKGSGACGLHPLDSLEQKETQEQTSGQLVMLRKAQEFFQTCD AEGKGF I
 ARKDMQRLHKELPLSLEELEDVFDALDADGNGYLTPEFTTGFSHFFF SQNNPSQEDAGEQVAQRHEEKV
 YLSRGDEDLGDMGEDEEAQFRMLMDRLGAQKVLEDESDVKQLWLQLKKEEPHLLSNFEDFLTRIISQLQE
 AHEEKNELECALKRKIAAYDEEIQHLYEEMEQQIKSEKEQFLKQDTERFQARSQELEQKLLCKEQELEQL
 TQKQKRLEGQCTALHHDKHETKAENTKLLTNQELARELERTSWELQDAQQQLSLQQEACKLHQEKEME
 VYRVTESLQREKAGLLKQLDFLCVGGHWPVLRAPPRSLGSEGPV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6476_f01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_032680

ORF Size: 1185 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_032680.4](#)

RefSeq Size: 2204 bp

RefSeq ORF: 1188 bp

Locus ID: 84766

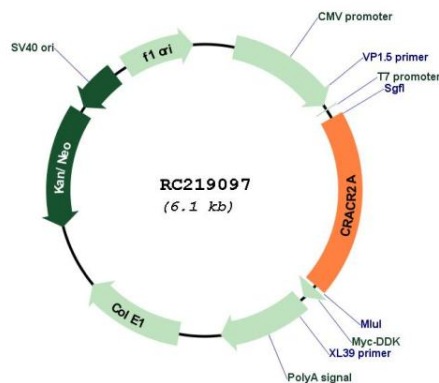
UniProt ID: [Q9BSW2](#)

Cytogenetics: 12p13.32

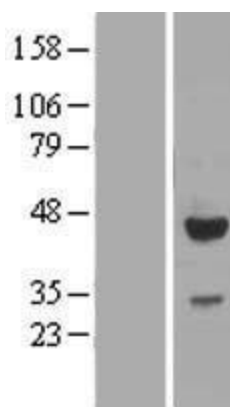
MW: 45.4 kDa

Gene Summary: 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.[UniProtKB/Swiss-Prot Function]

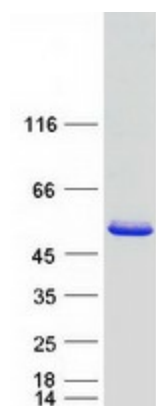
Product images:



Circular map for RC219097



Western blot validation of overexpression lysate (Cat# [LY409980]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219097 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CRACR2A protein (Cat# [TP319097]). The protein was produced from HEK293T cells transfected with CRACR2A cDNA clone (Cat# RC219097) using MegaTran 2.0 (Cat# [TT210002]).