10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DOC2A Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12839c

Product Information

Application	FC, WB, IHC-P, E
Primary Accession	Q14183
Other Accession	Q14184, P70611, Q7TNF0, NP_003577.2
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32573
Calculated MW	43959
Antigen Region	277-306

Additional Information

Gene ID	8448
Other Names	Double C2-like domain-containing protein alpha, Doc2, Doc2-alpha, DOC2A
Target/Specificity	This DOC2A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 277-306 amino acids from the Central region of human DOC2A.
Dilution	FC~~1:10~50 WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DOC2A Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DOC2A
Function	Calcium sensor which most probably regulates fusion of vesicles with membranes. Binds calcium and phospholipids. May be involved in calcium

	dependent neurotransmitter release through the interaction with UNC13A. May be involved in calcium-dependent spontaneous release of neurotransmitter in absence of action potentials in neuronal cells. Regulates Ca(2+)-dependent secretory lysosome exocytosis in mast cells.
Cellular Location	Lysosome. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane; Peripheral membrane protein. Synapse, synaptosome
Tissue Location	Predominantly expressed in brain. Also expressed in testis.

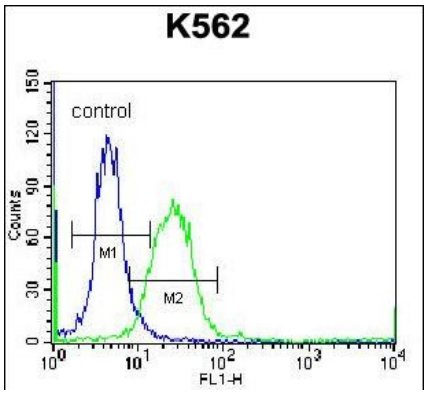
Background

There are at least two protein isoforms of the Double C2 protein, namely alpha (DOC2A) and beta (DOC2B), which contain two C2-like domains. DOC2A and DOC2B are encoded by different genes; these genes are at times confused with the unrelated DAB2 gene which was initially named DOC-2. DOC2A is mainly expressed in brain and is suggested to be involved in Ca(2+)-dependent neurotransmitter release.

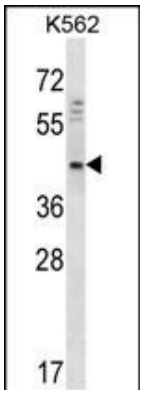
References

Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)
Glessner, J.T., et al. Proc. Natl. Acad. Sci. U.S.A. 107(23):10584-10589(2010)
Guilmatre, A., et al. Arch. Gen. Psychiatry 66(9):947-956(2009)
Kumar, R.A., et al. PLoS ONE 4 (2), E4582 (2009) :
Higashio, H., et al. J. Immunol. 180(7):4774-4784(2008)

Images

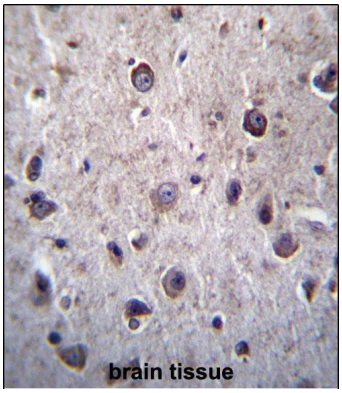


DOC2A Antibody (Center) (Cat. #AP12839c) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated donkey-anti-rabbit secondary antibodies were used for the analysis.



DOC2A Antibody (Center) (Cat. #AP12839c) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the DOC2A antibody detected the DOC2A protein (arrow).

DOC2A Antibody (Center) (Cat. #AP12839c)immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary



antibody and DAB staining.This data demonstrates the use of DOC2A Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.