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ZDHC2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5592a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q9UIJ5
Other Accession	NP_057437.1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB27035
Calculated MW	42022
Antigen Region	77-106

Additional Information

Gene ID	51201
Other Names	Palmitoyltransferase ZDHHC2, Reduced expression associated with metastasis protein, Ream, Reduced expression in cancer protein, Rec, Zinc finger DHHC domain-containing protein 2, DHHC-2, Zinc finger protein 372, ZDHHC2, REAM, REC, ZNF372
Target/Specificity	This ZDHC2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 77-106 amino acids of human ZDHC2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	ZDHC2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ZDHHC2 (HGNC:18469)
Synonyms	REAM, REC, ZNF372

Function	Palmitoyltransferase that catalyzes the addition of palmitate onto various protein substrates and is involved in a variety of cellular processes (PubMed:18296695, PubMed:18508921, PubMed:19144824, PubMed:21343290, PubMed:22034844, PubMed:23793055). Has no stringent fatty acid selectivity and in addition to palmitate can also transfer onto target proteins myristate from tetradecanoyl-CoA and stearate from octadecanoyl-CoA (By similarity). In the nervous system, plays a role in long term synaptic potentiation by palmitoylating AKAP5 through which it regulates protein trafficking from the dendritic recycling endosomes to the plasma membrane and controls both structural and functional plasticity at excitatory synapses (By similarity). In dendrites, mediates the palmitoylation of DLG4 when synaptic activity decreases and induces synaptic clustering of DLG4 and associated AMPA- type glutamate receptors (By similarity). Also mediates the de novo and turnover palmitoylation of RGS7BP, a shuttle for Gi/o-specific GTPase- activating proteins/GAPs, promoting its localization to the plasma membrane in response to the activation of G protein-coupled receptors. Through the localization of these GTPase-activating proteins/GAPs, it also probably plays a role in G protein-coupled receptors signaling in neurons (By similarity). Also probably plays a role in cell adhesion by palmitoylating CD9 and CD151 to regulate their expression and function (PubMed:18508921). Palmitoylates the endoplasmic reticulum protein CKAP4 and regulates its localization to the plasma membrane (PubMed:18296695, PubMed:19144824). Could also palmitoylate LCK and regulate its localization to the plasma membrane (PubMed:22034844).
Cellular Location	Postsynaptic density {ECO:0000250|UniProtKB:Q9JKR5}. Postsynaptic recycling endosome membrane {ECO:0000250|UniProtKB:P59267}; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein. Note=Translocates to postsynaptic density when synaptic activity decreases. {ECO:0000250|UniProtKB:Q9JKR5}
Tissue Location	Ubiquitously expressed (PubMed:10918388, PubMed:22034844). Reduced expression in colorectal cancers with liver metastasis (PubMed:10918388).

Background

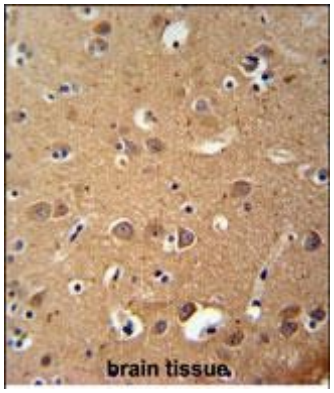
Palmitoyltransferase specific for GAP43 and DLG4/PSD95 (By similarity).

References

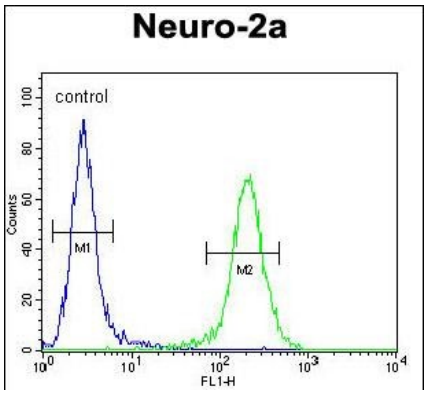
Planey, S.L., et al. Mol. Biol. Cell 20(5):1454-1463(2009)
Sharma, C., et al. Mol. Biol. Cell 19(8):3415-3425(2008)
Zhang, J., et al. Mol. Cell Proteomics 7(7):1378-1388(2008)
Li, B., et al. J. Biol. Chem. 277(32):28870-28876(2002)
Oyama, T., et al. Genes Chromosomes Cancer 29(1):9-15(2000)

Images

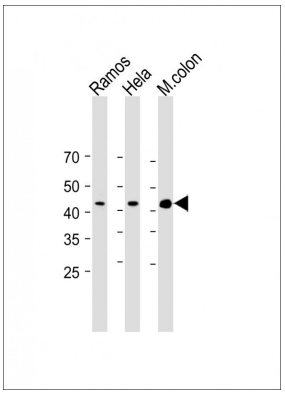
ZDHC2 Antibody (N-term) (Cat. #AP5592a) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the ZDHC2 Antibody (N-term) for immunohistochemistry.



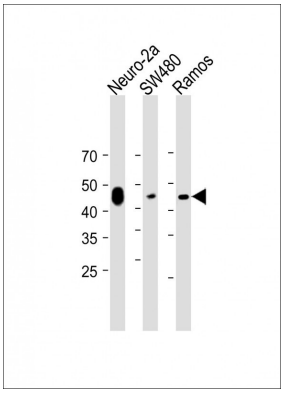
Clinical relevance has not been evaluated.



ZDHC2 Antibody (N-term) (Cat. #AP5592a) flow cytometric analysis of Neuro-2a cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



All lanes: Anti-ZDHC2 Antibody (N-term) at 1:1000 dilution Lane 1: Ramos whole cell lysate Lane 2: Hela whole cell lysate Lane 3: Mouse colon lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 42 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes: Anti-ZDHC2 Antibody (N-term) at 1:1000 dilution Lane 1: Neuro-2a whole cell lysate Lane 2: SW480 whole cell lysate Lane 3: Ramos whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 42 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Inhibition of MiR-155 suppresses cell migration in nasopharyngeal carcinoma through targeting ZDHHC2.
- A critical role for ZDHHC2 in metastasis and recurrence in human hepatocellular carcinoma.
- Reduced expression of ZDHHC2 is associated with lymph node metastasis and poor prognosis in gastric adenocarcinoma.