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ZDHHC5/ZNF375 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57108

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q9C0B5
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	77545
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ZDHHC5/ZNF375
Epitope Specificity	621-715/715
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell Membrane
SIMILARITY	Belongs to the DHHC palmitoyltransferase family. ERF2/ZDHHC9 subfamily. Contains 1 DHHC-type zinc finger.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	ZDHHC5 belongs to the DHHC palmitoyltransferase family, ERF2/ZDHHC9 subfamily. Palmitoylation plays a significant role in subcellular trafficking of proteins between membrane compartments, as well as in modulating protein-protein interactions, and is critical for trafficking and function of signaling molecules.

Additional Information

Gene ID	25921
Other Names	Palmitoyltransferase ZDHHC5, 2.3.1.225, Zinc finger DHHC domain-containing protein 5, DHHC-5, Zinc finger protein 375, ZDHHC5, KIAA1748, ZNF375
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ZDHHC5 {ECO:0000303|PubMed:38599239, ECO:0000312|HGNC:HGNC:18472}
Function	Palmitoyltransferase that catalyzes the addition of palmitate onto various protein substrates such as CTNND2, CD36, GSDMD, NLRP3, NOD1, NOD2, STAT3 and S1PR1 thus plays a role in various biological processes including cell adhesion, inflammation, fatty acid uptake, bacterial sensing or cardiac functions (PubMed:21820437, PubMed:29185452, PubMed:31402609, PubMed:31649195, PubMed:34293401, PubMed:38092000, PubMed:38530158, PubMed:38599239). Plays an important role in the regulation of synapse efficacy by mediating palmitoylation of delta-catenin/CTNND2, thereby increasing synaptic delivery and surface stabilization of alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionic acid receptors (AMPARs) (PubMed:26334723). Under basal conditions, remains at the synaptic membrane through FYN-mediated phosphorylation that prevents association with endocytic proteins (PubMed:26334723). Neuronal activity enhances the internalization and trafficking of DHHC5 from spines to dendritic shafts where it palmitoylates delta-catenin/CTNND2 (PubMed:26334723). Regulates cell adhesion at the plasma membrane by palmitoylating GOLGA7B and DSG2 (PubMed:31402609). Plays a role in innate immune response by mediating the palmitoylation of NOD1 and NOD2 and their proper recruitment to the bacterial entry site and phagosomes (PubMed:31649195, PubMed:34293401). Also participates in fatty acid uptake by palmitoylating CD36 and thereby targeting it to the plasma membrane (PubMed:32958780). Upon binding of fatty acids to CD36, gets phosphorylated by LYN leading to inactivation and subsequent CD36 caveolar endocytosis (PubMed:32958780). Controls oligodendrocyte development by catalyzing STAT3 palmitoylation (By similarity). Acts as a regulator of inflammatory response by mediating palmitoylation of NLRP3 and GSDMD (PubMed:38092000, PubMed:38530158, PubMed:38599239). Palmitoylates NLRP3 to promote inflammasome assembly and activation (PubMed:38092000). Activates pyroptosis by catalyzing palmitoylation of gasdermin-D (GSDMD), thereby promoting membrane translocation and pore formation of GSDMD (PubMed:38530158, PubMed:38599239).
Cellular Location	Cell membrane; Multi-pass membrane protein. Synapse