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ZDHHC3 Rabbit pAb

Catalog # AP96803

Product Information

Application	WB
Primary Accession	Q9NYG2
Other Accession	Q9NYG2
Reactivity	Rat, Human, Mouse
Predicted	Pig, Rabbit, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	34170
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GODZ/ZNF373
Epitope Specificity	201-299/299
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the DHHC palmitoyltransferase family. Contains 1 DHHC-type zinc finger.
Post-translational modifications	Autopalmitoylated.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Golgi-specific DHHC (Asp-His-His-Cys) zinc finger protein (GODZ), also known as, Palmitoyltransferase ZDHHC3 or Zinc finger protein 373, is a 327 amino acid protein member of the DHHC palmitoyltransferase family. Localized to the Golgi apparatus membrane, GODZ contains one DHHC-type zinc finger, which is necessary for its palmitoyltransferase activity. GODZ has been implicated in the palmitoylation and regulated trafficking of diverse substrates that function various inhibitory and excitatory synapses. Specifically, it palmitoylates the gamma subunit 2 of GABA(A) receptors, which leads to normal synaptic GABAergic inhibitory function. GODZ also palmitoylates glutamate receptors GRIA1 and GRIA2, which leads to their retention in Golgi. Two isoforms of GODZ exist as a result of alternative splicing events.

Additional Information

Gene ID	51304
Other Names	DHHC-3; DHHC3; GODZ; ZNF373; 1110020O22Rik; 1810006O10Rik; 2210017C02Rik; Gramp1; Zfp373; ZDHC3_HUMAN; ZDHHC3; Acyltransferase ZDHHC3; Protein DHHC1; Zinc finger DHHC domain-containing protein 3 (DHHC-3); 2.3.1.225; ZDHC3_MOUSE; GABA-A receptor-associated membrane protein 1; Golgi-specific DHHC zinc finger protein; zDHHC palmitoyltransferase 3; zinc finger DHHC-type containing 3; zinc finger

DHHC-type palmitoyltransferase 3

Dilution WB=1:500-2000

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 ZDHHC3 (HGNC:18470)

Function Golgi-localized palmitoyltransferase that catalyzes the addition of palmitate onto various protein substrates (PubMed:19001095, PubMed:21926431, PubMed:22240897, PubMed:22314500, PubMed:23034182). 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). Plays an important role in G protein-coupled receptor signaling pathways involving GNAQ and potentially other heterotrimeric G proteins by regulating their dynamic association with the plasma membrane (PubMed:19001095). Palmitoylates ITGA6 and ITGB4, thereby regulating the alpha-6/beta-4 integrin localization, expression and function in cell adhesion to laminin (PubMed:22314500). Plays a role in the TRAIL-activated apoptotic signaling pathway most probably through the palmitoylation and localization to the plasma membrane of TNFRSF10A (PubMed:22240897). In the brain, by palmitoylating the gamma subunit GABRG2 of GABA(A) receptors and regulating their postsynaptic accumulation, plays a role in synaptic GABAergic inhibitory function and GABAergic innervation (By similarity). Palmitoylates the neuronal protein GAP43 which is also involved in the formation of GABAergic synapses (By similarity). Palmitoylates NCDN thereby regulating its association with endosome membranes (By similarity). Probably palmitoylates PRCD and is involved in its proper localization within the photoreceptor (By similarity). Could mediate the palmitoylation of NCAM1 and regulate neurite outgrowth (By similarity). Could palmitoylate DNAJC5 and regulate its localization to Golgi membranes (By similarity). Also constitutively palmitoylates DLG4 (By similarity). May also palmitoylate SNAP25 (By similarity). Could palmitoylate the glutamate receptors GRIA1 and GRIA2 but this has not been confirmed in vivo (By similarity). Could also palmitoylate the D(2) dopamine receptor DRD2 (PubMed:26535572). May also palmitoylate LAMTOR1, promoting its localization to lysosomal membranes (PubMed:35893977). Palmitoylates the Toll-like receptor 9/TLR9 in the Golgi and thereby regulates TLR9 trafficking to endosomes (PubMed:38169466). May palmitoylate CALHM1 and CALHM3 subunits of gustatory voltage-gated ion channels and modulate channel gating and kinetics (By similarity). Catalyzes the palmitoylation of CADM4 at 'Cys-347', ensuring its localization to the plasma membrane (PM) and protein stability (By similarity). The presence of CADM4 at the PM is essential for its function in CNS myelination, particularly through its associations with other cell adhesion molecules (By similarity).

Cellular Location Golgi apparatus membrane; Multi-pass membrane protein. Note=Localizes to the Golgi cis cisterna. {ECO:0000250|UniProtKB:Q8R173}

Tissue Location Widely expressed with significant expression in heart, lung, liver, skeletal muscle, kidney, testis, thymus, small intestine and leukocyte.

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