GODZ (C-13): sc-79960



The Power to Question

BACKGROUNDBACKGROUND

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 γ subunit two 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.

REFERENCES

- Uemura, T., Mori, H. and Mishina, M. 2002. Isolation and characterization of Golgi apparatus-specific GODZ with the DHHC zinc finger domain. Biochem. Biophys. Res. Commun. 296: 492-496.
- Coyle, J.E. and Nikolov, D.B. 2003. GABARAP: lessons for synaptogenesis. Neuroscientist 9: 205-216.
- Keller, C.A., Yuan, X., Panzanelli, P., Martin, M.L., Alldred, M., Sassoè-Pognetto, M. and Lüscher, B. 2004. The γ2 subunit of GABA_A receptors is a substrate for palmitoylation by GODZ. J. Neurosci. 24: 5881-5891.
- Hayashi, T., Rumbaugh, G. and Huganir, R.L. 2005. Differential regulation of AMPA receptor subunit trafficking by palmitoylation of two distinct sites. Neuron 47: 709-723.
- Fang, C., Deng, L., Keller, C.A., Fukata, M., Fukata, Y., Chen, G. and Lüscher,
 2006. GODZ-mediated palmitoylation of GABA_A receptors is required for normal assembly and function of GABAergic inhibitory synapses. J. Neurosci. 26: 12758-12768.
- Chen, Z.W. and Olsen, R.W. 2007. GABAA receptor associated proteins: a key factor regulating GABA_A receptor function. J. Neurochem. 100: 279-294.
- Kanematsu, T., Mizokami, A., Watanabe, K. and Hirata, M. 2007. Regulation of GABA_A-receptor surface expression with special reference to the involvement of GABARAP (GABA_A receptor-associated protein) and PRIP (phospholipase C-related, but catalytically inactive protein). J. Pharmacol. Sci. 104: 285-292.

CHROMOSOMAL LOCATION

Genetic locus: ZDHHC3 (human) mapping to 3p21.31; Zdhhc3 (mouse) mapping to 9 F4.

SOURCE

GODZ (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of GODZ of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-79960 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GODZ (C-13) is recommended for detection of GODZ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GODZ (C-13) is also recommended for detection of GODZ in additional species, including equine, canine, bovine and porcine.

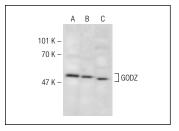
Suitable for use as control antibody for GODZ siRNA (h): sc-75158, GODZ siRNA (m): sc-75159, GODZ shRNA Plasmid (h): sc-75158-SH, GODZ shRNA Plasmid (m): sc-75159-SH, GODZ shRNA (h) Lentiviral Particles: sc-75158-V and GODZ shRNA (m) Lentiviral Particles: sc-75159-V.

Molecular Weight (predicted) of GODZ: 37 kDa.

Molecular Weight (observed) of GODZ: 49 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-87 MG cell lysate: sc-2411 or SK-N-MC cell lysate: sc-2237.

DATA



GODZ (C-13): sc-79960. Western blot analysis of GODZ expression in SK-N-MC ($\bf A$), HeLa ($\bf B$) and U-87 MG ($\bf C$) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.



Try **GODZ (A-10): sc-377378** or **GODZ (H-2): sc-514702**, our highly recommended monoclonal alternatives to GODZ (C-13).

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com