SANTA CRUZ BIOTECHNOLOGY, INC.

DFNA5 (G-9): sc-393162

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DFNA5 (deafness, autosomal dominant 5), also known as ICERE-1, is a 496 amino acid protein that is expressed in cochlea tissue, as well as in placenta, brain, heart, liver, lung and pancreas as two alternatively spliced isoforms, designated short and long. Defects in the gene encoding DFNA5 are the cause of non-syndromic sensorineural deafness autosomal dominant type 5 (DFNA5), a form of sensorineural hearing loss that results from damage to one of various structures that receive sound information in the brain. The gene encoding DFNA5 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to Osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

CHROMOSOMAL LOCATION

Genetic locus: DFNA5 (human) mapping to 7p15.3; Dfna5 (mouse) mapping to 6 B2.3.

SOURCE

DFNA5 (G-9) is a mouse monoclonal antibody raised against amino acids 221-496 mapping at the C-terminus of DFNA5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DFNA5 (G-9) is available conjugated to agarose (sc-393162 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393162 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393162 PE), fluorescein (sc-393162 FITC), Alexa Fluor® 488 (sc-393162 AF488), Alexa Fluor® 546 (sc-393162 AF546), Alexa Fluor® 594 (sc-393162 AF594) or Alexa Fluor® 647 (sc-393162 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393162 AF680) or Alexa Fluor® 790 (sc-393162 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

DFNA5 (G-9) is recommended for detection of DFNA5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DFNA5 siRNA (h): sc-77135, DFNA5 siRNA (m): sc-77136, DFNA5 shRNA Plasmid (h): sc-77135-SH, DFNA5 shRNA Plasmid (m): sc-77136-SH, DFNA5 shRNA (h) Lentiviral Particles: sc-77135-V and DFNA5 shRNA (m) Lentiviral Particles: sc-77136-V.

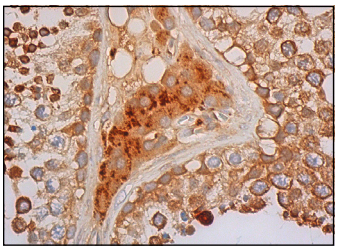
Molecular Weight of long DFNA5: 55 kDa.

Molecular Weight of short DFNA5: 11 kDa.

STORAGE

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

DATA



DFNA5 (G-9): sc-393162. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

1. Poh, L., et al. 2021. AIM2 inflammasome mediates hallmark neuropathological alterations and cognitive impairment in a mouse model of vascular dementia. Mol. Psychiatry 26: 4544-4560.
2. Wang, L.Q., et al. 2021. Perfluoroalkyl substance pollutants activate the innate immune system through the AIM2 inflammasome. Nat. Commun. 12: 2915.
3. Poh, L., et al. 2021. Intermittent fasting attenuates inflammasome-associated apoptotic and pyroptotic death in the brain following chronic hypoperfusion. Neurochem. Int. 148: 105109.
4. Poh, L., et al. 2021. AIM2 inflammasome mediates apoptotic and pyroptotic death in the cerebellum following chronic hypoperfusion. Exp. Neurol. 346: 113856.
5. Geng, W., et al. 2022. Huaier attenuates the adverse effects of pyroptosis by regulating the methylation of rat mesangial cells: an *in vitro* study. BMC Complement. Med. Ther. 22: 92.
6. Wang, W., et al. 2022. N-acetylcysteine protect inner hair cells from cisplatin by alleviated celluar oxidative stress and apoptosis. Toxicol. In Vitro 81: 105354.
7. Patel, K., et al. 2023. Loss of polarity regulators initiates gasdermin-E-mediated pyroptosis in syncytiotrophoblasts. Life Sci. Alliance 6: e202301946.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.