

3PGDH (C-20): sc-16222



The Power to Question

BACKGROUND

The survival and development of central neurons require the supply of trophic factors by glial cells. The trophic actions of glial cells on Purkinje neurons are mediated by L-serine and glycine, which are glia-derived trophic factors synthesized by 3PGDH. 3PGDH protein is 544 amino acids in length. Two distinct mRNA transcripts that encode for 3PGDH protein in normal human tissues are dominant 2.1 kb mRNA, which is highly expressed in prostate, testis, ovary, brain, liver, kidney, and pancreas, and weakly expressed in thymus, colon, and heart, and 710 bp mRNA, which is highly expressed in heart and skeletal muscle. 3PGDH is regulated at the transcriptional level depending on tissue specificity and cellular proliferative status. 3PGDH protein is also highly expressed in adult and fetal brain tissues. 3PGDH protein plays an important role in the metabolism, development, and function of the central nervous system and its deficiency is a treatable congenital error that impairs L-serine biosynthesis which is characterized by congenital microcephaly, psychomotor retardation, and seizures.

CHROMOSOMAL LOCATION

Genetic locus: PHGDH (human) mapping to 1p12; Phgdh (mouse) mapping to 3 F2.2.

SOURCE

3PGDH (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of 3PGDH of human origin.

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-16222 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

3PGDH (C-20) is recommended for detection of 3PGDH of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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). 3PGDH (C-20) is also recommended for detection of 3PGDH in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for 3PGDH siRNA (h): sc-105011, 3PGDH siRNA (m): sc-108938, 3PGDH shRNA Plasmid (h): sc-105011-SH, 3PGDH shRNA Plasmid (m): sc-108938-SH, 3PGDH shRNA (h) Lentiviral Particles: sc-105011-V and 3PGDH shRNA (m) Lentiviral Particles: sc-108938-V.

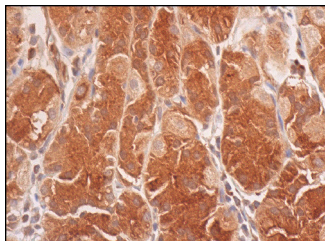
Molecular Weight of 3PGDH: 56.8 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, human liver extract: sc-363766 or MOLT-4 cell lysate: sc-2233.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



3PGDH (C-20): sc-16222. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Du, H., et al. 2010. 3-Phosphoglycerate dehydrogenase expression is regulated by HOXA10 in murine endometrium and human endometrial cells. *Reproduction* 139: 237-245.

STORAGE

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

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **3PGDH (B-1): sc-390610** or **3PGDH (B-3): sc-393283**, our highly recommended monoclonal alternatives to 3PGDH (C-20).