SANTA CRUZ BIOTECHNOLOGY, INC.

GRXCR1 (I-13): sc-242976

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The Power to Question

BACKGROUND

GRXCR1 (glutaredoxin domain-containing cysteine-rich protein 1), also known as DFNB25, is a 290 amino acid protein that belongs to the GRXCR1 family and contains one glutaredoxin domain, which may function in the reversible S-glutathionylation of proteins. Localizing to cell projections, GRXCR1 is highly expressed in fetal cochlea with moderate levels found in testis and low levels expressed in adult lung, brain and duodenum. GRXCR1 may play a role in actin filament architecture in developing stereocilia. The gene encoding GRXCR1 maps to human chromosome 4p13; defects to this gene result in deafness autosomal recessive type 25 (DFNB25), which is characterized by progressive hearing loss, impaired speech development and vestibular dysfunction.

REFERENCES

1. Odeh, H., et al. 2004. Characterization of two transgene insertional mutations at pirouette, a mouse deafness locus. Audiol. Neurootol. 9: 303-314.
2. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
3. Guipponi, M., et al. 2008. An integrated genetic and functional analysis of the role of type II transmembrane serine proteases (TMPRSSs) in hearing loss. Hum. Mutat. 29: 130-141.
4. Schraders, M., et al. 2010. Homozygosity mapping reveals mutations of GRXCR1 as a cause of autosomal-recessive nonsyndromic hearing impairment. Am. J. Hum. Genet. 86: 138-147.
5. Odeh, H., et al. 2010. Mutations in Grxcr1 are the basis for inner ear dysfunction in the pirouette mouse. Am. J. Hum. Genet. 86: 148-160.

CHROMOSOMAL LOCATION

Genetic locus: GRXCR1 (human) mapping to 4p13; Grxcr1 (mouse) mapping to 5 C3.1.

SOURCE

GRXCR1 (I-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GRXCR1 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-242976 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

GRXCR1 (I-13) is recommended for detection of GRXCR1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with GRXCR2.

GRXCR1 (I-13) is also recommended for detection of GRXCR1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GRXCR1 siRNA (m): sc-145789, GRXCR1 shRNA Plasmid (m): sc-145789-SH and GRXCR1 shRNA (m) Lentiviral Particles: sc-145789-V.

Molecular Weight of GRXCR1: 32 kDa.

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.

PROTOCOLS

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