

DGCR2 (C-14): sc-86118

BACKGROUND

DGCR2 (DiGeorge syndrome critical region gene 2), also known as IDD (integral membrane protein, deleted in DGS) is a 550 amino acid single-pass membrane protein that primarily functions as an adhesion receptor and is thought to be involved in cell-matrix or cell-cell interactions, therefore playing an important role in cell migration and differentiation. Due to the chromosomal location of the gene encoding DGCR2, it is suspected that a defect in this gene is involved in the pathogenesis of DiGeorge syndrome, also known as velocardiofacial syndrome, which is a complex syndrome involving multiple organs with symptoms such as cardiac defects, cleft palate and a characteristic facial appearance. The chromosomal region of 22q11.21 is also frequently found deleted in schizophrenic patients, suggesting that downregulation of DGCR2 may be implicated in the disease.

REFERENCES

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2. Demczuk, S., et al. 1995. Cloning of a balanced translocation breakpoint in the DiGeorge syndrome critical region and isolation of a novel potential adhesion receptor gene in its vicinity. *Hum. Mol. Genet.* 4: 551-558.
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4. Taylor, C., et al. 1997. Cloning and mapping of murine DGCR2 and its homology to the SEZ-12 seizure-related protein. *Mamm. Genome* 8: 371-375.
5. Van Esch, H., et al. 1999. Partial DiGeorge syndrome in two patients with a 10p rearrangement. *Clin. Genet.* 55: 269-276.
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7. Shifman, S., et al. 2006. A complete genetic association scan of the 22q11 deletion region and functional evidence reveal an association between DGCR2 and schizophrenia. *Hum. Genet.* 120: 160-170.
8. Ishiguro, H., et al. 2008. Replication study for associations between polymorphisms in the CLDN5 and DGCR2 genes in the 22q11 deletion syndrome region and schizophrenia. *Psychiatr. Genet.* 18: 255-256.

CHROMOSOMAL LOCATION

Genetic locus: DGCR2 (human) mapping to 22q11.21; Dgcr2 (mouse) mapping to 16 A3.

SOURCE

DGCR2 (C-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of DGCR2 of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86118 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DGCR2 (C-14) is recommended for detection of DGCR2 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); non cross-reactive with DGCR 6 and DGCR 14.

Suitable for use as control antibody for DGCR2 siRNA (h): sc-77138, DGCR2 siRNA (m): sc-143023, DGCR2 shRNA Plasmid (h): sc-77138-SH, DGCR2 shRNA Plasmid (m): sc-143023-SH, DGCR2 shRNA (h) Lentiviral Particles: sc-77138-V and DGCR2 shRNA (m) Lentiviral Particles: sc-143023-V.

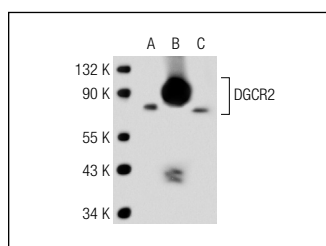
Molecular Weight of DGCR2: 61 kDa.

Positive Controls: DGCR2 (h): 293T Lysate: sc-114918 or HeLa whole cell lysate: sc-2200.

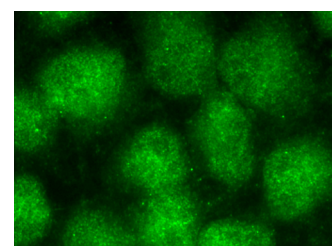
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



DGCR2 (C-14): sc-86118. Western blot analysis of DGCR2 expression in non-transfected 293T: sc-117752 (A), human DGCR2 transfected 293T: sc-114918 (B) and HeLa (C) whole cell lysates.



DGCR2 (C-14): sc-86118. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

RESEARCH USE

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