

DDX25 (G-4): sc-166289

BACKGROUND

DDX25, also designated GRTH for Gonadotropin-regulated testicular RNA helicase, is a testis-specific member of the DEAD-box protein family found in Leydig and germ cells. DDX25 has both ATPase and RNA helicase activity, regulating such translational-associated events as mRNA nuclear export during spermatid development. DDX25 can be phosphorylated on threonine residues, with the phosphorylated form found only in the cytoplasm and not in the nucleus. Essential for spermatogenesis, DDX25 participates in germ cell development and is upregulated by Gonadotropin at the transcriptional level. Genetic variations in DDX25 may contribute to male infertility due to spermatogenic impairment.

REFERENCES

- Sheng, Y., et al. 2003. Cell-specific and hormone-regulated expression of Gonadotropin-regulated testicular RNA helicase gene (GRTH/DDX25) resulting from alternative utilization of translation initiation codons in the rat testis. *J. Biol. Chem.* 278: 27796-27803.
- Tsai-Morris, C.H., et al. 2004. Gonadotropin-regulated testicular RNA helicase (GRTH/DDX25) is essential for spermatid development and completion of spermatogenesis. *Proc. Natl. Acad. Sci. USA* 101: 6373-6378.
- Tsai-Morris, C.H., et al. 2004. Genomic organization and transcriptional analysis of gonadotropin-regulated testicular RNA helicase—GRTH/DDX25 gene. *Gene* 331: 83-94.
- Mee, L., et al. 2005. Hydrolethalus syndrome is caused by a missense mutation in a novel gene HYL1. *Hum. Mol. Genet.* 14: 1475-1488.
- Abdelhaleem, M. 2005. RNA helicases: regulators of differentiation. *Clin. Biochem.* 38: 499-503.

CHROMOSOMAL LOCATION

Genetic locus: DDX25 (human) mapping to 11q24.2; Ddx25 (mouse) mapping to 9 A4.

SOURCE

DDX25 (G-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 7-37 at the N-terminus of DDX25 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166289 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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

DDX25 (G-4) is recommended for detection of DDX25 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DDX25 siRNA (h): sc-72229, DDX25 siRNA (m): sc-72230, DDX25 shRNA Plasmid (h): sc-72229-SH, DDX25 shRNA Plasmid (m): sc-72230-SH, DDX25 shRNA (h) Lentiviral Particles: sc-72229-V and DDX25 shRNA (m) Lentiviral Particles: sc-72230-V.

Molecular Weight of nuclear DDX25: 56 kDa.

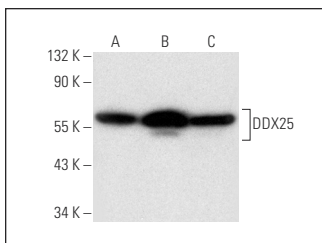
Molecular Weight of cytoplasmic DDX25: 61 kDa.

Positive Controls: F9 cell lysate: sc-2245, IMR-32 cell lysate: sc-2409 or DDX25 (h): 293T Lysate: sc-112550.

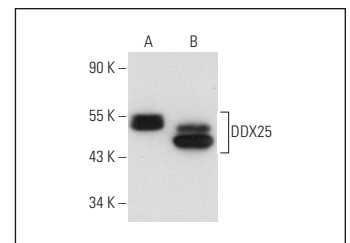
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DDX25 (G-4): sc-166289. Western blot analysis of DDX25 expression in F9 (A), IMR-32 (B) and NTERA-2 cl.D1 (C) whole cell lysates.



DDX25 (G-4): sc-166289. Western blot analysis of DDX25 expression in non-transfected: sc-117752 (A) and human DDX25 transfected: sc-112550 (B) 293T whole cell lysates.

PROTOCOLS

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