

Sprm-1 (L-21): sc-134031

BACKGROUND

Tissue-restricted POU domain transcription factors, which bind octamer or octamer-like gene sequences, play roles in cellular differentiation and the development of several organs. Belonging to the POU transcription factor family, Sprm-1 (sperm 1 POU domain transcription factor), also known as POU5F2 (POU domain, class 5, transcription factor 2), is a 328 amino acid nuclear protein that contains one homeobox DNA-binding domain and one POU-specific domain. Sprm-1 is a transcription factor that preferentially binds to the octamer motif (5'-ATGTTAAT-3'). In the embryo, Sprm-1 expression is restricted to brain, whereas in the adult it is exclusively expressed in brain, skeletal muscle, lung, heart and germ cells. Homozygous null Sprm-1 mice are subfertile, yet exhibit normal testicular morphology and normal numbers of mobile spermatozoa, suggesting that Sprm-1 plays a regulatory role in the haploid spermatid.

REFERENCES

- Hinkley, C.S., Martin, J.F., Leibham, D. and Perry, M. 1992. Sequential expression of multiple POU proteins during amphibian early development. *Mol. Cell. Biol.* 12: 638-649.
- Andersen, B., Pearce, R.V., Schlegel, P.N., Cichon, Z., Schonemann, M.D., Bardin, C.W. and Rosenfeld, M.G. 1993. Sperm 1: a POU-domain gene transiently expressed immediately before meiosis I in the male germ cell. *Proc. Natl. Acad. Sci. USA* 90: 11084-11088.
- Wey, E., Lyons, G.E. and Schäfer, B.W. 1994. A human POU domain gene, mPOU, is expressed in developing brain and specific adult tissues. *Eur. J. Biochem.* 220: 753-762.
- Zini, A., Mielnik, A. and Schlegel, P.N. 1996. POU-domain gene expression during spermatogenesis. *World J. Urol.* 14: 274-277.
- Pearce, R.V., Drolet, D.W., Kalla, K.A., Hooshmand, F., Bermingham, J.R. and Rosenfeld, M.G. 1997. Reduced fertility in mice deficient for the POU protein sperm-1. *Proc. Natl. Acad. Sci. USA* 94: 7555-7560.

CHROMOSOMAL LOCATION

Genetic locus: POU5F2 (human) mapping to 5q15.

SOURCE

Sprm-1 (L-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic Sprm-1 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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

Sprm-1 (L-21) is recommended for detection of Sprm-1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Sprm-1 siRNA (h): sc-91619, Sprm-1 shRNA Plasmid (h): sc-91619-SH and Sprm-1 shRNA (h) Lentiviral Particles: sc-91619-V.

Molecular Weight (predicted) of Sprm-1: 36 kDa.

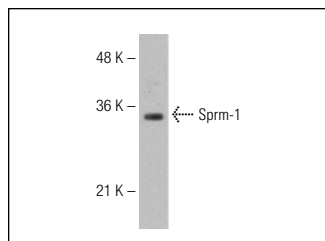
Molecular Weight (observed) of Sprm-1: 34 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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).

DATA



Sprm-1 (L-21): sc-134031. Western blot analysis of Sprm-1 expression in Hep G2 whole cell lysate.

PROTOCOLS

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