

RNase 9 (I-14): sc-165382

BACKGROUND

Ribonucleases are ubiquitous enzymes involved in RNA metabolism and are classified in several families on the basis of their structural, catalytic and biological properties. RNase 9 (ribonuclease, RNase A family, 9 (non-active)), also known as HEL128 or ribonuclease-like protein 9, is a 205 amino acid secreted protein that belongs to the RNase A family. Unlike other RNase A family members, RNase 9 lacks ribonuclease activity. Widely expressed, RNase 9 is found at high levels in epithelium of the epididymal tubule and the post-equatorial region of the sperm head, with greater expression found in men than boys. The gene encoding RNase 9 maps to human chromosome 14q11.2 and mouse chromosome 14 C1.

REFERENCES

- Kirchhoff, C. 1998. Molecular characterization of epididymal proteins. *Rev. Reprod.* 3: 86-95.
- Singhania, N.A., et al. 1999. Rapid evolution of the ribonuclease A superfamily: adaptive expansion of independent gene clusters in rats and mice. *J. Mol. Evol.* 49: 721-728.
- Penttinen, J., et al. 2003. Discovery *in silico* and characterization *in vitro* of novel genes exclusively expressed in the mouse epididymis. *Mol. Endocrinol.* 17: 2138-2151.
- Devor, E.J., et al. 2004. LOC 390443 (RNase 9) on chromosome 14q11.2 is related to the RNase A superfamily and contains a unique amino-terminal preproteinlike sequence. *Hum. Biol.* 76: 921-935.
- Cho, S., et al. 2005. The ribonuclease A superfamily of mammals and birds: identifying new members and tracing evolutionary histories. *Genomics* 85: 208-220.
- Zhu, C.F., et al. 2007. RNase9, an androgen-dependent member of the RNase A family, is specifically expressed in the rat epididymis. *Biol. Reprod.* 76: 63-73.
- Liu, J., et al. 2008. Cloning, expression and location of RNase9 in human epididymis. *BMC Res. Notes* 1: 111.

CHROMOSOMAL LOCATION

Genetic locus: Rnase9 (rat) mapping to 15p14.

SOURCE

RNase 9 (I-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RNase 9 of rat 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-165382 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

RNase 9 (I-14) is recommended for detection of RNase 9 of rat 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 other RNase family members.

Molecular Weight of RNase 9: 24 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.

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.