

ADAM7 (E-22): sc-130940

BACKGROUND

The ADAM (a disintegrin and metalloprotease) protein family, which includes over 30 membrane-anchored, glycosylated, Zn²⁺ dependent proteases, plays a role in cell-cell and cell-matrix interface related processes, including fertilization, muscle fusion, secretion of TNF α (tumor necrosis factor α), and modulation of the neurogenic function of Notch and Delta. The ADAM proteins possess a signal-domain, a pro-domain, a metalloprotease domain, a disintegrin domain (Integrin ligand), a cysteine-rich region, an epidermal growth factor-like domain, a transmembrane domain and a cytoplasmic tail. ADAMs are expressed in a wide range of mammalian tissues and several are abundantly expressed in the male reproductive tract. ADAM7, also designated GP-83, binds wheat germ agglutinin (WGA), and is synthesized as a protein and secreted by corpus and cauda epididymus. ADAM7 conjugates to spermatozoa during their transit in human epididymus, and may be involved in sperm maturation.

REFERENCES

1. Wolfsberg, T.G., et al. 1995. ADAM, a novel family of membrane proteins containing a disintegrin and metalloprotease domain: multipotential functions in cell-cell and cell-matrix interactions. *J. Cell Biol.* 131: 275-278.
2. Stone, A.L., et al. 1999. Structure-function analysis of the ADAM family of disintegrin-like and metalloproteinase-containing proteins (review). *J. Protein Chem.* 18: 447-465.
3. Sun, G.H., et al. 2000. Conjugation of maturation-related wheat-germ-lectin-binding proteins to caput epididymal sperm in co-cultures with corpus epididymal epithelial cells of BALB/c mouse. *Arch. Androl.* 45: 43-52.
4. Liu, H.W., et al. 2000. GP-83 and GP-39, two glycoproteins secreted by human epididymis are conjugated to spermatozoa during maturation. *Mol. Hum. Reprod.* 6: 422-428.
5. Sun, G.H., et al. 2000. Purification of GP-83, a glycoprotein secreted by the human epididymis and conjugated to mature spermatozoa. *Mol. Hum. Reprod.* 6: 429-434.
6. Primakoff, P., et al. 2000. The ADAM gene family: surface proteins with adhesion and protease activity. *Trends Genet.* 16: 83-87.
7. Lin, Y.C., et al. 2001. Cloning and characterization of a complementary DNA encoding a human epididymis-associated disintegrin and metalloprotease 7 protein. *Biol. Reprod.* 65: 944-950.

CHROMOSOMAL LOCATION

Genetic locus: ADAM7 (human) mapping to 8p21.2; Adam7 (mouse) mapping to 14 D2.

SOURCE

ADAM7 (E-22) is an affinity purified rabbit polyclonal antibody raised against synthetic ADAM7 peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

ADAM7 (E-22) is recommended for detection of ADAM7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 ADAM7 siRNA (h): sc-41404, ADAM7 siRNA (m): sc-41405, ADAM7 shRNA Plasmid (h): sc-41404-SH, ADAM7 shRNA Plasmid (m): sc-41405-SH, ADAM7 shRNA (h) Lentiviral Particles: sc-41404-V and ADAM7 shRNA (m) Lentiviral Particles: sc-41405-V.

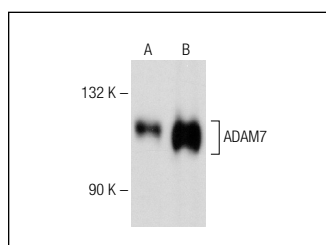
Molecular Weight of ADAM7: 108 kDa.

Positive Controls: Rat epididymus tissue extract or mouse epididymus tissue extract.

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) 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



ADAM7 (E-22): sc-130940. Western blot analysis of ADAM7 expression in rat epididymis (A) and mouse epididymis (B) tissue extracts.

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.

PROTOCOLS

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