

# ADAM2 (Q-16): sc-25133

## BACKGROUND

The ADAM (a disintegrin and metalloprotease) protein family, which includes over 30 membrane-anchored, glycosylated, Zn<sup>2+</sup> dependent proteases, plays a role in cell-cell and cell-matrix interface related processes, including fertilization, muscle fusion, secretion of TNF $\alpha$  (tumor necrosis factor  $\alpha$ ), 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. ADAM2, also designated fertilin  $\beta$  and PH30  $\beta$ , forms a heterodimer with ADAM1 (fertilin  $\alpha$  or PH30  $\alpha$ ) on the surface of spermatozoa, which mediates gamete cell adhesion during fertilization. ADAM2 utilizes an ECD motif to interact with integrins expressed on the egg plasma membrane. The gene encoding human ADAM2 maps to chromosome 8p11.2.

## 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. Vidaeus, C.M., et al. 1997. Human fertilin  $\beta$ : identification, characterization, and chromosomal mapping of an ADAM gene family member. *Mol. Reprod. Dev.* 46: 363-369.
3. 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.
4. Primakoff, P. and Myles, D.G. 2000. The ADAM gene family: surface proteins with adhesion and protease activity. *Trends Genet.* 16: 83-87.
5. Cho, C., et al. 2000. Analysis of mouse fertilin in wild-type and fertilin  $\beta$ <sup>-/-</sup> sperm: evidence for C-terminal modification,  $\alpha/\beta$  dimerization, and lack of essential role of fertilin  $\alpha$  in sperm-egg fusion. *Dev. Biol.* 222: 289-295.
6. Nishimura, H., et al. 2002. The ADAM1 $\alpha$  and ADAM1 $\beta$  genes, instead of the ADAM1 (fertilin  $\alpha$ ) gene, are localized on mouse chromosome 5. *Gene* 291: 67-76.

## CHROMOSOMAL LOCATION

Genetic locus: Adam2 (mouse) mapping to 14 D1.

## SOURCE

ADAM2 (Q-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ADAM2 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-25133 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ADAM2 (Q-16) is recommended for detection of ADAM2 of mouse and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

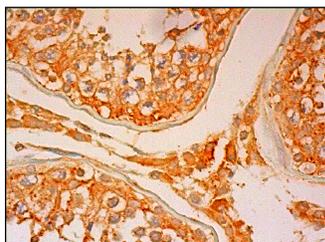
Suitable for use as control antibody for ADAM2 siRNA (m): sc-41403, ADAM2 shRNA Plasmid (m): sc-41403-SH and ADAM2 shRNA (m) Lentiviral Particles: sc-41403-V.

Molecular Weight of ADAM2: 45 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



ADAM2 (Q-16): sc-25133. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing membrane and cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

## 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.