

# HE4 (C-12): sc-27570

## BACKGROUND

HE4 (whey acidic protein (WAP)-type four-disulfide core-2, WFDC2) is a small secretory protein that may influence sperm maturation. HE4 gene expression is high in pulmonary epithelial cells and in some ovarian cancers. HE4 protein has a WAP motif that contains eight cysteines forming four disulfide bonds at the core of the protein. The WAP motif functions as a protease inhibitor in many of the family members that contain them.

## REFERENCES

1. Kirchoff, C., Habben, I., Ivell, R. and Krull, N. 1991. A major human epididymis-specific cDNA encodes a protein with sequence homology to extracellular proteinase inhibitors. *Biol. Reprod.* 45: 350-357.
2. Bingle, L., Singleton, V. and Bingle, C.D. 2002. The putative ovarian tumour marker gene HE4 (WFDC2), is expressed in normal tissues and undergoes complex alternative splicing to yield multiple protein isoforms. *Oncogene* 21: 2768-2773.
3. Hellstrom, I., Raycraft, J., Hayden-Ledbetter, M., Ledbetter, J.A., Schummer, M., McIntosh, M., Drescher, C., Urban, N. and Hellstrom, K.E. 2003. The HE4 (WFDC2) protein is a biomarker for ovarian carcinoma. *Cancer Res.* 63: 3695-3700.
4. Hagiwara, K., Kikuchi, T., Endo, Y., Huqun, Usui, K., Takahashi, M., Shibata, N., Kusakabe, T., Xin, H., Hoshi, S., Miki, M., Inooka, N., Tokue, Y. and Nukiwa, T. 2003. Mouse SWAM1 and SWAM2 are antibacterial proteins composed of a single whey acidic protein motif. *J. Immunol.* 170: 1973-1979.
5. Urban, N., McIntosh, M.W., Andersen, M. and Karlan, B.Y. 2003. Ovarian cancer screening. *Hematol. Oncol. Clin. North Am.* 17: 989-1005.
6. Berry, N.B., Cho, Y.M., Harrington, M.A., Williams, S.D., Foley, J. and Nephew, K.P. 2004. Transcriptional targeting in ovarian cancer cells using the human epididymis protein 4 promoter. *Gynecol. Oncol.* 92: 896-904.
7. LocusLink Report (LocusID: 10406). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: WFDC2 (human) mapping to 20q13.12.

## SOURCE

HE4 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HE4 of human 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-27570 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

HE4 (C-12) is recommended for detection of precursor and mature HE4 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)], 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 HE4 siRNA (h): sc-43826, HE4 shRNA Plasmid (h): sc-43826-SH and HE4 shRNA (h) Lentiviral Particles: sc-43826-V.

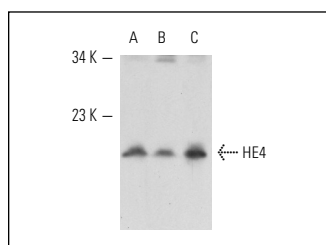
Molecular Weight of HE4: 13 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, DU 145 cell lysate: sc-2268 or HeLa whole cell lysate: sc-2200.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



HE4 (C-12): sc-27570. Western blot analysis of HE4 expression in PC-3 (A), DU 145 (B) and HeLa (C) whole cell lysates.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**MONOS**  
Satisfaction  
Guaranteed

Try **HE4 (3F9): sc-293473**, our highly recommended monoclonal alternative to HE4 (C-12).