

Rabbit Polyclonal Anti-HE4 antibody

Catalog Number: ESP-112AP

Lot Number:

General Information

Product	HE4 Antibody
Description	WAP domain containing protein HE4-V3 Antibody Affinity Purified C-epitope
Accession #	Uniprot: Q14508 GenBank: AAL37487.1
Verified Applications	ELISA, IHC, IP, WB
Species Cross Reactivity	Human, Monkey, Mouse, Rat
Host	Rabbit
Immunogen	Synthetic peptide taken within amino acid region 70-120 on human WAP four-disulfide core domain protein 2.
Alternative Nomenclature	EDDM4 antibody, epididymal protein 4 antibody, Epididymal secretory protein E4 antibody, Epididymis specific whey acidic protein type four disulfide core antibody, Major epididymis-specific protein E4 antibody, MGC57529 antibody, Putative protease inhibitor WAP5 antibody, WAP 5 antibody, WAP domain containing protein HE4 antibody, WAP four disulfide core domain 2 antibody, WAP5 antibody, WFDC 2 antibody

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Purification Method	Immobilized antigen affinity chromatography
Determinant	C-epitope
Immunoglobulin & Concentration	0.68 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20°C for long term storage.

Recommended Dilutions

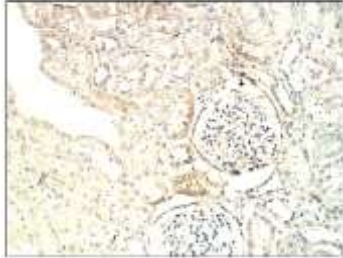
DOT Blot	1:20,000
ELISA	1:20,000
Immunohistochemistry	1:50-1:100
Immunoprecipitation	1:200
Western Blot	1:500-1:750

Related Products

Catalog

BIOTIN-Conjugated	ESP.2-BIOTIN
FITC-Conjugated	ESP.2-FITC
Antigenic Blocking Peptide	P-ESP.2
Western Blot Positive Control	PC-ESP
N-epitope HE4 Antibody	ESP-101AP

Application Verification:



Baboon Kidney: HE4
Primary Antibody: ESP-112AP; 1:100 dilution in IHC Blocking Buffer. DAB (brown) staining and Hematoxylin QS (blue) counterstain. 20X magnification on Leica DM4000B. FPPE section.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

The whey acidic protein (WAP) domain is a conserved motif, containing eight cysteines found in a characteristic 4-disulphide core arrangement, that is present in a number of otherwise unrelated proteins. One of these proteins, which contains two WAP domains, is HE4 (also known as WFDC2). HE4 was originally described as an epididymis specific protein, but more recently suggested to be a putative serum tumor marker for ovarian cancer and a presumptive role in natural immunity. The HE4 protein expression is not only confined to epididymis but is expressed in a number of normal human tissues out side the reproductive system, including regions of the respiratory tract and nasopharynx and in a subset of lung tumor cell lines. HE4 gene expression was highest in normal human trachea and salivary gland, and to a lesser extent, lung, prostate, pituitary gland, thyroid, and kidney. Highest level of expression of ESPE4 was observed in adenocarcinomas of the lung, and occasional breast, transitional cell and pancreatic carcinomas (1). The WFDC2 gene undergoes extensive splicing in malignant tissues that gives rise to five WAP domain containing iso forms (2).

WFDC2 is expressed in some epithelial cells of the upper airways as well as in mucous cells and ducts of sub mucosal glands. No staining was seen in the peripheral lung tissue. Intense staining is found in major salivary glands and in minor glands of the nose, sinuses, posterior tongue and tonsil. Studies with the related protein Secretory Leukocyte Protease Inhibitor (SLPI) show that although both proteins are expressed in similar tissues, the precise cellular localization differs. Significant increases in expression and localization of WFDC2 are seen in patients with Cystic Fibrosis (3). ESPE2 protein is a 124 amino acids (15 kDa) protein. ESPE4 protein has sequence homology to extracellular proteinase inhibitor and is localized on human chromosome 20. The ESPE4 protein is a secreted glycoprotein (Asn-44) that is over expressed in serous and endometrioid ovarian carcinomas (4). There are at least 5 named variants (HE4-V1 to HE4-V5) expressed as a result of alternate splicing and they serve as endopeptidase inhibitors.

The HE4-selective antibodies were generated against a synthetic peptide taken within amino acid region 70-120 on human WAP four-disulfide core domain protein 2. The HE4 antibodies were affinity purified over immobilized antigen based affinity chromatography. The purified immunoglobulins are stabilized in antibody stabilization buffer. Antigenic blocking peptide (P-HE4.2) and western blot positive controls (PC-HE4) are available. Antibodies can be conjugated to fluorophores or secondary enzymes upon request at nominal cost. For a complete listing of all FabGennix antibodies and lab services, please visit <http://fabgennix.com>.

References:

1. Galgano MT, Hampton GM, Frierson HF Jr. Comprehensive analysis of HE4 expression in normal and malignant human tissues. *Mod Pathol*. 2006 Jun;19(6):847-53.
2. Bingle L, Singleton V, Bingle CD. The putative ovarian tumour marker gene HE4 (WFDC2), is expressed in normal tissues and undergoes complex alternative splicing to yield multiple protein isoforms. *Oncogene*. 2002 Apr 18;21(17):2768-73.
3. Bingle L, Cross SS, High AS, Wallace WA, Rassl D, Yuan G, Hellstrom I, Campos MA, Bingle CD. WFDC2 (HE4): a potential role in the innate immunity of the oral cavity and respiratory tract and the development of adenocarcinomas of the lung. *Respir Res*. 2006 Apr 6;7:61.
4. Drapkins R., Horsten v. H. H., Lin Y., et al., Human epididymis protein (HE4) is secreted glycoprotein that is over expressed by serous and endometrioid ovarian carcinomas. *Cancer Res*. 65, 2162-69, 2005.

* For users who may require large amounts of the products listed above, please inquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.