abcam

Product datasheet

Anti-CD46 antibody ab231984

4 Images

Overview

Product name	Anti-CD46 antibody
Description	Rabbit polyclonal to CD46
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB
Species reactivity	**Reacts with:** Mouse, Human, Pig **Predicted to work with:** African green monkey, Orangutan
Immunogen	Recombinant fragment (His-tag) corresponding to Human CD46 aa 100-300. (Expressed in E.coli). Database link: **P15529** Run BLAST with Run BLAST with
Positive control	WB: Recombinant human CD46 protein; pig heart and mouse thymus tissue lysate. IHC-P: Human prostate and pancreas tissue.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.011% Proclin 300 Constituents: 55.77% Glycerol (glycerin, glycerine), 44.219% PBS
Purity	Immunogen affinity purified
Purification notes	Antigen-specific affinity chromatography followed by Protein A affinity chromatography.
Clonality	Polyclonal

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab231984 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 5 - 20 µg/ml.
WB		Use a concentration of 1 - 5 µg/ml. Predicted molecular weight: 44 kDa.

Target

Function Acts as a cofactor for complement factor I, a serine protease which protects autologous cells against complement-mediated injury by cleaving C3b and C4b deposited on host tissue. May be involved in the fusion of the spermatozoa with the oocyte during fertilization. Also acts as a costimulatory factor for T-cells which induces the differentiation of CD4+ into T-regulatory 1 cells. T-regulatory 1 cells suppress immune responses by secreting interleukin-10, and therefore are thought to prevent autoimmunity. A number of viral and bacterial pathogens seem to exploit this property and directly induce an immunosuppressive phenotype in T-cells by binding to CD46.

Tissue specificity Expressed by all cells except erythrocytes.

Involvement in disease Defects in CD46 are a cause of susceptibility to hemolytic uremic syndrome atypical type 2 (AHUS2) [MIM:612922]. An atypical form of hemolytic uremic syndrome. It is a complex genetic disease characterized by microangiopathic hemolytic anemia, thrombocytopenia, renal failure and absence of episodes of enterocolitis and diarrhea. In contrast to typical hemolytic uremic syndrome, atypical forms have a poorer prognosis, with higher death rates and frequent progression to end-stage renal disease. Note=Susceptibility to the development of atypical hemolytic uremic syndrome can be conferred by mutations in various components of or regulatory factors in the complement cascade system. Other genes may play a role in modifying the phenotype. Patients with CD46 mutations seem to have an overall better prognosis compared to patients carrying CFH mutations.

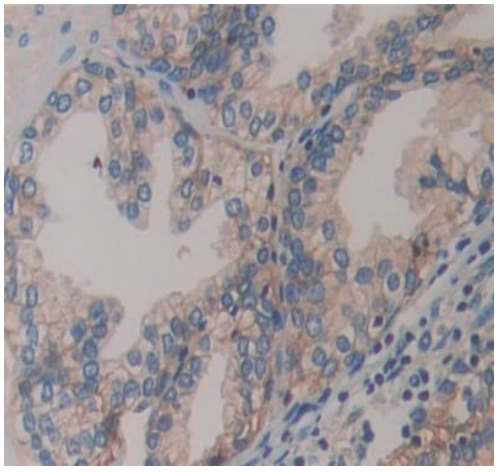
Sequence similarities Contains 4 Sushi (CCP/SCR) domains.

Domain Sushi domains 1 and 2 are required for interaction with human adenovirus B PIV/FIBER protein and with Measles virus H protein. Sushi domains 2 and 3 are required for Herpesvirus 6 binding. Sushi domain 3 is required for Neisseria binding. Sushi domains 3 and 4 are required for interaction with Streptococcus pyogenes M protein and are the most important for interaction with C3b and C4b.

Post-translational modifications N-glycosylated on Asn-83; Asn-114 and Asn-273 in most tissues, but probably less N-glycosylated in testis. N-glycosylation on Asn-114 and Asn-273 is required for cytoprotective function. N-glycosylation on Asn-114 is required for Measles virus binding. N-glycosylation on Asn-273 is required for Neisseria binding. N-glycosylation is not required for human adenovirus binding.
Extensively O-glycosylated in the Ser/Thr-rich domain. O-glycosylation is required for Neisseria binding but not for Measles virus or human adenovirus binding.

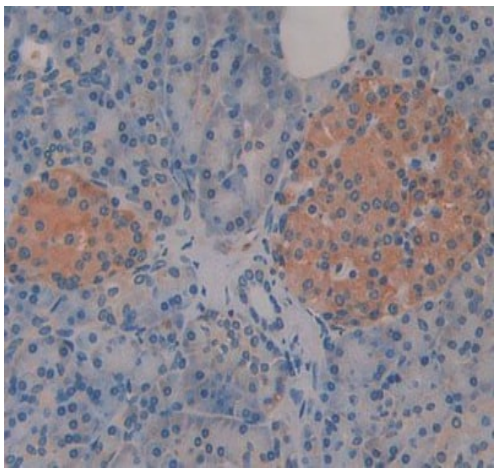
	In epithelial cells, isoforms B/D/F/H/J/L/3 are phosphorylated by YES1 in response to infection by Neisseria gonorrhoeae; which promotes infectivity. In T-cells, these isoforms may be phosphorylated by Lck.
Cellular localization	Cytoplasmic vesicle > secretory vesicle > acrosome inner membrane. Inner acrosomal membrane of spermatozoa. Internalized upon binding of Measles virus, Herpesvirus 6 or Neisseria gonorrhoeae, which results in an increased susceptibility of infected cells to complement-mediated injury. In cancer cells or cells infected by Neisseria, shedding leads to a soluble peptide.

Images



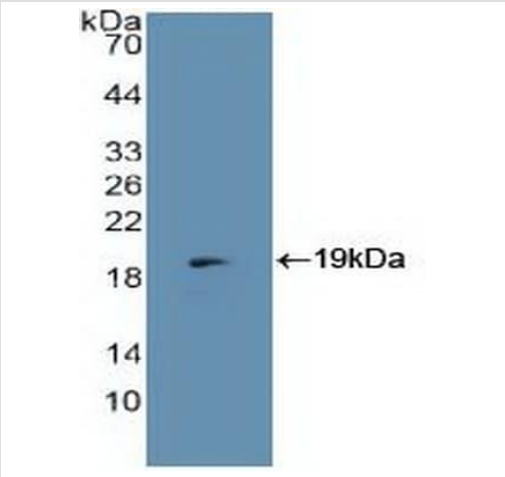
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD46 antibody (ab231984)

Formalin-fixed, paraffin-embedded human prostate tissue stained for CD46 using ab231984 at 30 µg/ml in immunohistochemical analysis. DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD46 antibody (ab231984)

Formalin-fixed, paraffin-embedded human pancreas tissue stained for CD46 using ab231984 at 30 µg/ml in immunohistochemical analysis. DAB staining.



Western blot - Anti-CD46 antibody (ab231984)

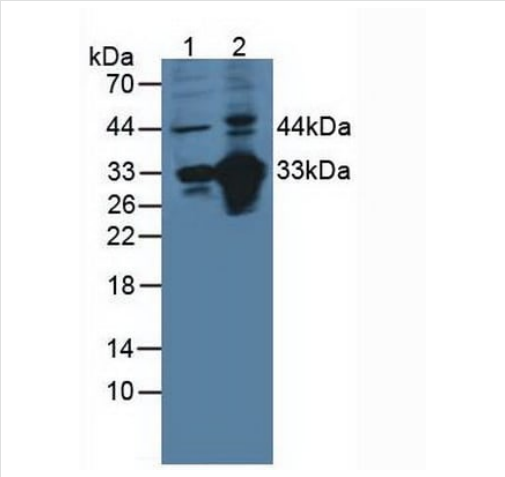
Anti-CD46 antibody (ab231984) at 3 µg/ml + Recombinant human CD46 protein

Secondary

HRP-Linked Guinea pig Anti-Rabbit Ab at 1/2000 dilution

Developed using the ECL technique.

Predicted band size: 44 kDa



Western blot - Anti-CD46 antibody (ab231984)

All lanes : Anti-CD46 antibody (ab231984) at 3 µg/ml

Lane 1 : Pig heart tissue lysate

Lane 2 : Mouse thymus tissue lysate

Secondary

All lanes : HRP-Linked Guinea pig Anti-Rabbit Ab at 1/2000 dilution

Developed using the ECL technique.

Predicted band size: 44 kDa

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