Revision 4

Store at -20C

#13241

CD46 (D6N7H) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P	H Mk	Endogenous	50-70	Rabbit IgG	#P15529	4179

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:800

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #28704.

Specificity/Sensitivity

CD46 (D6N7H) Rabbit mAb recognizes endogenous levels of total CD46 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro199 of human CD46 protein.

Background

Complement Regulatory Protein; Membrane Cofactor Protein (CD46) is a type 1 membrane protein that plays an important inhibitory role in the complement system (1). CD46 exhibits a cofactor activity that promotes inactivation of C3b and C4b by serum factor 1, thereby protecting host (self) cells from complement-dependent cytotoxicity (1,2). The importance of CD46 to complement regulation is underscored by the observation that genetic loss of CD46 leads to development of atypical hemolytic-uremic syndrome (aHUS), a disease characterized by uncontrolled complement activation (2,3). In addition to its role in complement inactivation, CD46 can function as a receptor for selected bacteria and viruses (4), and is reportedly required for proper fusion of spermatozoa to the oocyte membrane during fertilization (5). CD46 is implicated in the development and/or progression of selected cancer types. For example, research studies show elevated CD46 expression in medulloblastoma tumor samples (6), while CD46 expression has been linked with poor prognosis in breast cancer (7). It has been suggested that upregulation of CD46 may serve to protect cancer cells from complement-dependent cytotoxicity, thereby evading destruction by the immune system (8,9).

Background References

1. Liszewski, M.K. et al. (1991) *Annu Rev Immunol* 9, 431-55.
2. Riley-Vargas, R.C. et al. (2004) *Trends Immunol* 25, 496-503.
3. Noris, M. and Remuzzi, G. (2009) *N Engl J Med* 361, 1676-87.
4. Cattaneo, R. (2004) *J Virol* 78, 4385-8.
5. Taylor, C.T. et al. (1994) *Hum Reprod* 9, 907-11.
6. Studebaker, A.W. et al. (2010) *Neuro Oncol* 12, 1034-42.
7. Maciejczyk, A. et al. (2011) *Appl Immunohistochem Mol Morphol* 19, 540-6.
8. Zhang, S. et al. (2013) *FEBS Lett* 587, 645-51.
9. Cui, W. et al. (2012) *FEBS Lett* 586, 766-71.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human **Mk:** Monkey

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