

C-Reactive Protein (D1N1U) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	25	Rabbit IgG	#P02741	1401

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

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

Specificity/Sensitivity

C-Reactive Protein (D1N1U) Rabbit mAb recognizes endogenous levels of total human C-reactive protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val38 of human C-reactive protein.

Background

C-reactive protein (CRP) is a pentraxin family protein involved in several host defense-related functions as a result of its ability to bind to foreign pathogens and damaged host cells (1). CRP is a cyclic, non-covalent pentameric protein and normal constituent of human sera that is produced primarily by hepatocytes (2). Secretion of CRP is induced by proinflammatory cytokines, including IL-6 and IL-1β, and significantly increases during acute phase responses to tissue injury, infection, or other inflammatory stimuli (3,4). The presence of CRP is often utilized as an inflammation marker, and monitoring CRP levels in plasma is a useful tool in assessing disease progression or treatment effectiveness. CRP is also regarded as a risk assessment factor for the development and progression of cardiovascular disease (5).

CRP binds to phosphorylcholine that is present on the surface of damaged tissues and in the bacterial cell wall of certain pathogens (6). Through this calcium-dependent interaction, CRP promotes agglutination and initiates the activation of the complement cascade. This results in enhanced opsonization through CRP interaction with FcγRI and FcγRIIA, which facilitates phagocytosis (7).

Background References

1. Black, S. et al. (2004) *J Biol Chem* 279, 48487-90.
2. Thompson, D. et al. (1999) *Structure* 7, 169-77.
3. Weinhold, B. and Rüther, U. (1997) *Biochem J* 327 (Pt 2), 425-9.
4. Zhang, D. et al. (1995) *Biochem J* 310 (Pt 1), 143-8.
5. Sellmayer, A. et al. (2003) *Int Angiol* 22, 15-23.
6. Gewurz, H. et al. (1982) *Adv Intern Med* 27, 345-72.
7. Du Clos, T.W. and Mold, C. (2004) *Immunol Res* 30, 261-77.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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