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## Monoclonal Antibody to Porcine C-Reactive Protein

Monoclonal antibody PC1 recognizes porcine C-reactive protein (CRP). CRP belongs to a highly conserved phylogenetically ancient family called pentraxins, which have five identical non-covalently linked subunits. Native CRP in its pentameric form has a molecular weight of approximately 115kDa. As in humans, CRP is an acute-phase protein in pigs. It has been suspected to be directly involved in the pathogenesis of ischemic diseases through the activation of the complement system. CRP levels have been measured in porcine serum. Median levels in specific pathogen-free animals were 5µg/ml and increased 40- to 70-fold due to inflammation or infection with *Mycoplasma hyopneumoniae*.

Monoclonal antibody PC1 was generated against purified porcine CRP.

*This antibody was produced serum-free, without fetal calf serum.*

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**Product number: T-3508**

**Clone: PC1**

**Lot: 03PO1603**

### TECHNICAL AND ANALYTICAL CHARACTERISTICS:

**Host species, isotype:** Mouse IgG1, kappa

**Quantity:** 0.25mg

**Format:** Purified, liquid solution, supplied as 0.25ml solution. This stock solution contains 1mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), and 0.09% sodium azide as a preservative. No stabilizing protein has been added.

**Stability:** Original vial: 6 months at 4° to 8°C, 1 year at -20°C. Avoid repeated thawing and freezing.

**Applications:** Tested for ELISA and Western Blot.

**Approximate working dilutions:**

ELISA: 0.5µg/ml

Western Blot: 1µg/ml

Optimal dilutions should be determined by the end user.

Please see [www.bma.ch](http://www.bma.ch) for protocols and general information.

**Immunogen:** Purified porcine CRP

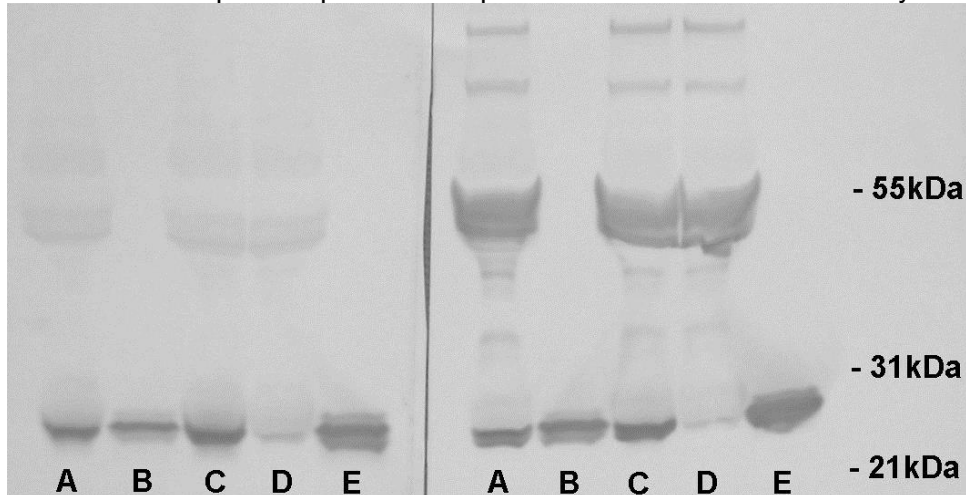
**Antigen, epitope:** Porcine CRP, The epitope has not been characterized

**Specificity:** **Pig:** CRP

**Other species:** does not react with human, sheep, goat or donkey CRP.

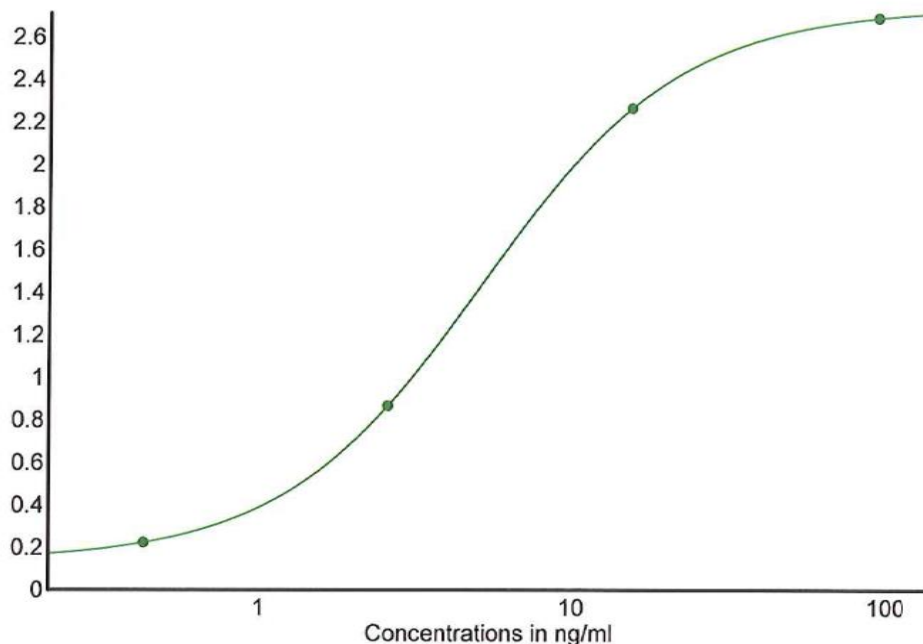
For *in vitro* research only. Caution: this product contains sodium azide, a poisonous and hazardous substance.

Western Blot of porcine plasma and poCRP with monoclonal antibody PC1:



Porcine plasma was diluted 1/25 and spiked with 0.08 or 0.3 $\mu$ g purified porcine CRP, respectively. PAGE was performed under reducing and denaturing conditions (10-20% gel), blotted (nitrocellulose) and developed with antibody PC1 (left) or competitor's monoclonal antibody (right). Lane A: plasma spiked with 0.08 $\mu$ g poCRP; lane B: 0.08 $\mu$ g poCRP; lane C: plasma spiked with 0.3 $\mu$ g poCRP; lane D: plasma; lane E: 0.3 $\mu$ g poCRP. Antibody PC1 barely reacts with the 50-55kDa bands visible on the right, presumably immunoglobulin heavy chains. Gel was slightly overloaded to allow visibility of CRP band in plasma. ©BMA Biomedicals

Direct ELISA with antibody PC1 (Lot 03PO1603):



Titration of PC1 against immobilized poCRP. Coating with 0.3 $\mu$ g/ml poCRP and blocking with 0.1% casein (BMA #3403) gave an EC50 for Lot 03PO1603 of 5.1ng/ml. ©BMA Biomedicals

### Selected references

M.D. Parra et al.: Porcine Acute Phase Protein Concentrations in Different Diseases in Field Conditions. *J. Vet. Med. B* 53: 488-93 (2006)

S. Martinez-Subiela et al.: A time-resolved immunofluorometric assay for porcine C-reactive protein quantification in whole blood. *Luminescence* 22: 171-76 (2007)