

## Anti-Protein C [HPC-4] Standard Size Ab01200-10.3

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This chimeric human antibody was made using the variable domain sequences of the original Mouse IgG1 format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Human IgG1, Fc Silent™, Kappa

**Clone Number:** HPC-4

**Alternative Name(s) of Target:** Autoprothrombin IIA; HPC4; Vitamin K-dependent protein C; Anticoagulant protein C; Blood coagulation factor XIV; PROC

**UniProt Accession Number of Target Protein:** P04070

**Published Application(s):** Blocking, Purification, ELISA

**Published Species Reactivity:** Baboons, Human

**Immunogen:** This antibody was raised by immunising mice with human protein C.

**Specificity:** Specifically binds to a specific twelve peptide sequence (EDQVDPRLIDGK) in the activation region of the Protein C (spanning the thrombin cleavage site). Does not react with activated protein C. Has been shown to be cross-reactive with baboon Protein C but not with bovine or mouse Protein C.

**Application Notes:** HPC-4 binds human protein C only in the presence of  $\text{Ca}^{2+}$ ; it binds to the reduced carboxymethylated protein C heavy chain, and it blocks protein C activation but does not bind or inactivate protein C or activated protein C bound to its plasma inhibitor. Furthermore, it is an anti-epitope tag antibody, as it recognizes the EDQVDPRLIDGK sequence (Taylor Jr et al., 1987; PMID: 3102560). It has been shown to work in ELISAs to determine expression levels (Velandar et al., 1992; PMID: 1465430). HPC-4 has been shown to be effective at purifying proteins tagged with its epitope (Rezaie et al., 1992; PMID: 1283093). It has also been used to block the activation of Protein C by the thrombin-thrombomodulin complex (Stearns et al., 1988; PMID: 2447082) and was used for the same purpose in Baboons to lower the threshold of sepsis (Taylor Jr et al., 1987; PMID: 3102560). HPC-4 has been used in many other studies to observe the function of Protein C by knocking out its function in a  $\text{Ca}^{2+}$ -dependent manner, purification, and others (Tanaka et al., 2006; PMID: 16398653) (Bae et al., 2007; PMID: 17823308).

**Antibody First Published in:** Taylor et al. Protein C prevents the coagulopathic and lethal effects of Escherichia coli infusion in the baboon. J Clin Invest. 1987 Mar;79(3):918-25. [PMID:3102560](#)

**Note on publication:** Describes the generation and characterisation of the HPC-4 antibody.

## Product Form

**Size:** 200 µg Purified antibody.

**Purification:** Protein A affinity purified

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.