

APC-PCI Complex specific antibody

Mouse monoclonal antibody

Subclass: IgG1/k

CAT. NO.

JST 001-38

Clone: M3

SPECIFICITY JST 001-38 is specific for APC:PCI complex and cleaved PCI but has little reactivity towards native PCI. The dissociation constants (as determined by standard surface plasmon resonance technique) are: $K_d = 4 \times 10^{-10}$ M for PCI in complex with APC and 2×10^{-10} M for cleaved PCI. The value of K_d for native PCI is too low to measure, i.e., $\geq 10^{-5}$ M.

IMMUNOGEN Mixture of PCI in complex with PSA (approx. 80%) and PCI cleaved from such a complex (approx. 20%).

TESTED APPLICATIONS ELISA, WB (Not applicable)

SPECIES REACTIVITY (POSITIVE) Human

SPECIES REACTIVITY (NEGATIVE) Not determined

EPITOPE SPECIFICITY The epitope is located in the calcium-binding N-terminal EGF domain of protein C.

PRESENTATION

Content: Available in 400 μ L and 1 mL size. 1 mg/mL +/- 15%. See Certificate of Analysis for details.

Preparation: Protein-A purified

Form: Liquid

Solvent: 0.01 M phosphate buffer, pH 7.4, with 0.14 M NaCl and 15 mM sodium azide

Storage: 4-8°C without exposure to light. No precautions necessary during handling.

APPLICATION **ELISA:** JST 001-38 shows excellent reactivity towards PCI in cleaved and complex form in ELISA. JST 001-38 is a part of the APC-PCI Matched Reagent Set and can be used in ELISA as a capture antibody in combination with SA001RA as the detection antibody (1-5).

WB: JST 001-38 shows low reactivity against denatured antigen in SDS-PAGE.

TARGET Activated Protein C (APC), a serine proteinase is inhibited by Protein C inhibitor (PCI). PCI belongs to a group of inhibitors sometimes referred to as serpins (serine proteinase inhibitors), and form 1:1 complexes with APC. PCI plasma concentration is approximately 4ug/ml. The complex formation between APC and PCI proceeds at a slow rate, which is manifested by a long half-life for APC in plasma, wherein $t_{1/2}$ is about 20 min. However, the rate of complex formation between APC and PCI is increased by heparin. Upon complex formation with APC, the serpin is cleaved in its so-called bait region, whereby a stable intermediate acyl complex is formed. With time, the intermediate acyl complex dissociates, whereby APC is regenerated and a proteolytically modified, i. e. cleaved, inactive serine proteinase inhibitor is formed.

REFERENCES

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2. Bremme K, Hamad R, Berg E, Strandberg K, Stenflo J (2012) The APC-PCI concentration as an early marker of activation of blood coagulation: a study of women on combined oral contraceptives. *Thromb Res*.130:636-9.
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