

APC-PCI Complex specific antibody

CAT. NO. JST 001-38

OVERVIEW

Product Name	APC-PCI Complex specific antibody	Conjugation	Unconjugated
Description	Mouse monoclonal antibody	Host	Mouse
Isotype	IgG1/k	Clone	M36
Tested Applications	ELISA, WB		

SPECIFICITY

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. $> 10^{-5}$ M.

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

Immunogen Mixture of PCI in complex with PSA (approx. 80%) and PCI cleaved from such a complex (approx. 20%). **Gene ID** 5104

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 4 µg/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.

Species Reactivity Human **Species Reactivity** Not determined
POSITIVE **NEGATIVE**

PROPERTIES

Form	Liquid	Unit Size	0,4 mL and 1 mL
Concentration	1 mg/mL $\pm 15\%$, See CoA for lot details		
Purification	Protein A or Protein G purified	Purification Notes	BSA free
Storage buffer	0.01 M phosphate buffer, pH 7.4, with 0.5 M NaCl and 15 mM sodium azide		
Storage condition	2-8°C without exposure to light		
Safety	Wear protective clothing		

TESTED APPLICATIONS

ELISA	JST 001-38 shows excellent reactivity towards PCI in cleaved and complex form in ELISA. (1-5)
WB	JST 001-38 shows low reactivity against denatured antigen in SDS-PAGE.

SCIENTIFIC REFERENCES

1. Strandberg K, Astermark J, Björge O, Becker C, Nilsson PE, Stenflo J (2001) Complexes between activated protein C and protein C inhibitor measured with a new method: comparison of performance with other markers of hypercoagulability in the diagnosis of deep vein thrombosis. *Thromb Haemost* 86:1400-08.

CONDITIONS

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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.
3. Elf JL, Strandberg K, Svensson PJ (2010) The diagnostic performance of APC-PCI complex determination compared to D-dimer in the diagnosis of deep vein thrombosis. *J Thromb Thrombolysis.* 29:465-70.
4. Bhiladvala P, Strandberg K, Stenflo J, Holm J (2006) Early identification of acute myocardial infarction by activated protein C-protein C inhibitor complex. *Thromb Res* 118:213-19.
5. Heslet L, Hald R, Recke C, Bangert K, Uttenthal LO (2008) Activated protein C-protein C inhibitor (APC-PCI) complex as a prognostic marker in sepsis. Presented at the The International Sepsis Forum (ISF) 2008, Granada, Spain.

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