ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

□ Cat. # PCT13-M Mouse Monoclonal anti-Human Procalcitonin (PCT) Clone #1, aff pure **SIZE**: 100 ug

Procalcitonin (PCT) is a peptide precursor of the hormone calcitonin, the latter being involved with calcium homeostasis. It is composed of 116 amino acids and is produced by parafollicular cells (C cells) of the thyroid and by the neuroendocrine cells of the lung and the intestine. The level of procalcitonin in the blood stream of healthy individuals is below the limit of detection (10 pg/mL) of clinical assays. The level of procalcitonin rises in a response to a proinflammatory stimulus, especially of bacterial origin. In this case, it is produced mainly by the cells of the lung and the intestine. It does not rise significantly with viral or non-infectious inflammations. With the derangements that a severe infection with an associated systemic response brings, the blood levels of procalcitonin may rise to 100 µg/L. Remarkably the high procalcitonin levels produced during infections are not followed by a parallel increase in calcitonin or a decrease in serum calcium levels.

PCT is a peptide hormone mainly produced by the C cells of the thyroid and certain endocrine cells of the lung. Under normal expression conditions, procalcitonin is immediately cleaved into three specific fragments, an N terminal residue, calcitonin and katacalcin. Levels of unprocessed procalcitonin rise significantly after bacterial infection, trauma or shock.

Measurement of procalcitonin can be used as a marker of severe sepsis caused by bacteria and generally grades well with the degree of sepsis, although levels of procalcitonin in the blood are very low. PCT has the greatest sensitivity (85%) and specificity (91%) for differentiating patients with systemic inflammatory response syndrome (SIRS) from those with sepsis, when compared with IL-2, IL-6, IL-8, CRP and TNF-alpha. Evidence is emerging that procalcitonin levels can reduce unnecessary antibiotic prescribing to people with lower respiratory tract infections. Currently, procalcitonin assays are widely used in the clinical environment.

Source of Antigen and Antibodies

Cat # PCT13-M, unconjugated antibody

Antigen	Fragments of human PCT protein
Ab Host/type	Mouse, monoclonal purified IgG, clone 1 (Cat # **PCT13-M**) Supplied in PBS, pH 7.4, 0.1 % sodium azide (NaN3)
2-Ab	Goat Anti-mouse IgG-HRP conjugate; Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non -immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Suggested Dilutions: 1:500-1:5K for Western; 1:5K-1:20K for ELISA. Further optimization may be needed under actual experimental conditions.

Storage

Short-term: unopened, undiluted liquid vials for less than a week at 4°C.

Long-term: at **–20°C** or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at **–20°C** or below.
Shipping: 4°C for solutions and room temp for powder.

Species Specificity

Specific for Human PCT.

General References: Yealy DM (2009) JAMA 302, 1115-1116; Meisner M (1999) Crit. Care. 3, 4550; Jones AE (2007) Ann. Emerg. Med. 50, 34-41

**All product are for In vitro research use only.*

Related material available from ADI

FIBN11-A	Anti-Human Plasma Fibrinogen IgG
FIBN11-BT	Anti-Human Plasma Fibrinogen IgG, Biotin conjugate
FIBN11-HRP	Anti-Human Plasma Fibrinogen IgG, HRP conjugate
FIBN12-A	Anti-Rat Fibrinogen, IgG, aff pure
FIBN15-N-10	Human Plasma Fibrinogen purified, >90%
FIBN16-N-50	Human plasma Fibrinogen fragment D,purified, >90%
FIBN17-N-50	Human plasma Fibrinogen fragment E,purified, >90%
FIBN18-N-100	Mouse plasma Fibrinogen,purified, >90% clottable
FIBN19-N-100	Mouse plasma Fibrinogen,purified, >90% clottable
SP-52245-1	Fibrinogen y-chain dodecapeptide
SP-52246-5	Fibrinogen-binding Peptide
SP-88462-1	Fibrinogen β-Chain (24-42)
PCT11-M	Mouse Monoclonal anti-human Procalcitonin (PCT) IgG#1 (capture), aff pure

PCT13-M 241010 170926AC

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