

****REPRESENTATIVE DATASHEET******Sheep anti-human Prekallikrein (PK)
Peroxidase Conjugated Affinity Purified IgG
0.1 mg**

Product #: SAPK-APHRP
Lot #: XXXX
Expiry date: XXXX

Store at -10 to -20°C

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For Research Use Only.
Not for use in diagnostic procedures.

Description of Prekallikrein (PK)

Prekallikrein (PK), previously known as Fletcher Factor, is a single chain glycoprotein produced in the liver. The plasma concentration of PK is 50 µg/ml (550 nM), approximately 75% of which circulates in complex with high molecular weight kininogen (HK) and the remainder as free PK. Plasma PK is heterogeneous in both mass and charge due to variable degrees of glycosylation. Approximately 90% of plasma PK has an apparent molecular weight of 88 kDa as determined by SDS-PAGE and the remaining 10% has an apparent mass of 85 kDa. The catalytic site resides in the light chain. The heavy chain of PK contains four apple-domain structures similar to those found in FXI and these are required for binding of PK to HK. PK is the zymogen form of the enzyme kallikrein, which is involved in the proteolysis of kininogens with subsequent release of bradykinin, a potent vasodilator. PK participates in the contact phase of coagulation as a substrate for surface-bound activated factor XII (FXIIa) in the presence of the cofactor HK. As PK and factor XI (FXI) both circulate in complex with HK, both are localized to activating surfaces through their respective binding to HK. Limited proteolysis of PK by FXIIa generates kallikrein, a two-chain serine protease that initiates the reciprocal activation of PK and FXI. Kallikrein activity in plasma is regulated predominantly by C1-Inhibitor and α₂macroglobulin, with relatively minor contributions by Protein C Inhibitor, α₂antiplasmin, and antithrombin¹⁻³.

REFERENCES and REVIEWS

1. Coleman RW, Schmaier AH; Contact System: A Vascular Biology Modulator With Anticoagulant, Profibrinolytic, Antiadhesive and Proinflammatory Attributes. Blood 90, pp 3819-3843, 1997.
2. DeLa Cadena R, Watchtfoegel YT, Colman RW, in Hemostasis and Thrombosis, 3rd Edition, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp. 219-240, J.B. Lippincott Co., Philadelphia, 1994.
3. Hojima Y, Pierce JV, Pisano JJ; Purification and Characterization of Multiple Forms of Human Plasma Prekallikrein. JBC 260, pp 400-406, 1985.

Product Specifications**Description:**

Vial containing XXXX ml of affinity purified IgG conjugated to horseradish peroxidase (HRP) through carbohydrate groups. Total protein is 0.1 mg.

Format:

APIgG-HRP conjugate as a clear, slightly red-brown liquid.

Host Animal:

Sheep

Immunogen:

Human active site-blocked kallikrein prepared from plasma.

Concentration:

APIgG-HRP concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient ($E^{1\%}_{280}$) of 14.

Buffer:

A buffered stabilizer solution containing 50% (v/v) glycerol.

Storage:

Store between -10 and -20°C. Product will become viscous but will not freeze. Avoid storage in frost-free freezers. Keep vial tightly capped. Allow product to warm to room temperature and gently mix before use. Avoid exposure to sodium azide as this is an inhibitor of peroxidase activity.

Specificity:

Prior to conjugation, this antibody was specific for prekallikrein as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of peroxidase labelled antibodies to prekallikrein.

Rz Ratio (Reinheitzzahl, A_{403}/A_{280}):

XXXX as determined spectrophotometrically.

Related Products:

Cat #: **SAPK-IG** Sheep anti-human Prekallikrein, whole IgG from antiserum
Cat #: **PK-EIA** Paired antibody set for ELISA of Prekallikrein, 4 x 96 wells
Cat #: **PK-DP** Human plasma deficient in Prekallikrein, immune depleted
Cat #: **PK-LDP** Lyophilized human plasma deficient in Prekallikrein, immune depleted

Visit our site (www.affinitybiologicals.com) for details.

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