

# Anti-Human Kininogen (Sheep)

## Affinity-Purified IgG 0.50 mg

Ref#: SAKN-AP  
Lot#: SAMPLE  
Exp. Date:



Store at -10 to -20°C

For Research Use Only  
Not for Use in Diagnostic Procedures  
For *in vitro* use only

<b>Immunogen:</b>	Human Kininogen (from human plasma)			
<b>Format:</b>	Affinity Purified IgG in 10 mM HEPES, pH 7.4, 150 mM NaCl, 50% (v/v) glycerol			
<b>Host:</b>	Sheep			
<b>Storage:</b>	Store between -10 and -20°C. Vial should be tightly capped. Do not store in frost-free freezers. Allow product to warm to room temperature and gently mix before use			
<b>Total Protein:</b>	0.50 mg			
<b>Applications:</b>	Suitable as a source of enriched antibodies For Research Use Only. Not for Use in Diagnostic Procedures. For <i>in vitro</i> use only			
<b>Volume:</b>	1 vial containing 0.250 mL anti-human, affinity purified IgG			
<b>Concentration:</b>	2 mg/mL affinity purified IgG by Absorbance; Extinction Coefficient $E^{1\%}_{280} = 13.4$			
<b>Specificity:</b>	Specificity demonstrated by immunoelectrophoresis and ELISA methods			
<b>Neutralizing Activity:</b>	Not Determined			
<b>Species Cross Reactivity:</b>	Dog:	ND	Human: ND	Mouse: ND
	Pig:	ND	Rabbit: ND	Rat: ND

Kininogens are multi-function proteins that are involved in the processes of coagulation, anticoagulation, fibrinolysis, inflammation and cell adhesion. They are produced in the liver but have also been found in platelets, granulocytes, renal tubular cells and skin. Two forms of kininogen are identified in plasma, both of which are the result of differential splicing of a single gene. High molecular weight kininogen (HMWK), previously known as Fitzgerald Factor, is a single chain glycoprotein of 120 kDa with a plasma concentration of 80 µg/mL (660 nM). Low molecular weight kininogen (LMWK), also known as α-cysteine protease inhibitor, is a single chain glycoprotein of 68 kDa with a plasma concentration of 160 µg/mL (2.35 µM). They share a common heavy chain and bradykinin domain, but have unique light chains. It is the light chain of HMWK that is responsible for the coagulant cofactor activity by binding to anionic surfaces and for the ability to bind the zymogens prekallikrein (PK) and factor XI (FXI). HMWK is cleaved by kallikrein in several sequential steps that result in the release of a potent vasodilator bradykinin and the conversion to a two-chain form of HMWK with increased cofactor activity. In plasma, most of the PK and FXI circulate in complex with HMWK. Activation of PK by FXIIa generates kallikrein, which initiates reciprocal activation of PK and FXI. The presence of HMWK also serves to protect kallikrein and activated FXI from protease inhibitors such as C1-Inhibitor, but regulation of the system may be accomplished through proteolytic inactivation of the HMWK cofactor activity by these enzymes.