



# Recombinant Protein Technical Manual

## Recombinant Mouse Kininogen/KNG1 Protein (His Tag)(Active)

RPES1916

### Product Data:

**Product SKU:** RPES1916

**Size:** 10µg

**Species:** Mouse

**Expression host:** HEK293 Cells

**Uniprot:** NP\_001095882.1

### Protein Information:

**Molecular Mass:** 52.5 kDa

**AP Molecular Mass:** 70-80 kDa

**Tag:** C-His

**Bio-activity:** Measured by its ability to inhibit papain cleavage of a fluorogenic peptide substrate Z-FR-AMC (R&D Systems, Catalog # ES009). The IC50 value is < 5 nM.

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile 20mM Tris, 100mM NaCl, pH 7.5

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Kng

## Immunogen Information:

**Sequence:** Glu 21-Ser 480

## Background:

Kininogen, also known as high molecular weight kininogen, Williams-Fitzgerald-Flaujeac factor, Alpha-2-thiol proteinase inhibitor, Fitzgerald factor, KNG1 and BDK, is a secreted protein which contains three cysteine domains. Kininogen / KNG1 is a protein from the blood coagulation system as well as the kinin-kallikrein system. It is a protein that adsorbs to the surface of biomaterials that come in contact with blood. Kininogen / KNG1 circulates throughout the blood and quickly adsorbs to the material surfaces. Kininogen / KNG1 is one of the early participants of the intrinsic pathway of coagulation, together with Factor XII (Hageman factor) and prekallikrein. Kininogen / KNG1 is one of the kininogens, a class of proteins. As with many other coagulation proteins, the protein was initially named after the patients in whom deficiency was first observed. When the clinical data were combined, it turned out that all patients, in fact, had a deficiency of the same protein. Defects in KNG1 are the cause of high molecular weight kininogen deficiency (HMWK deficiency) which is an autosomal recessive coagulation defect. Patients with HMWK deficiency do not have a hemorrhagic tendency, but they exhibit abnormal surface-mediated activation of fibrinolysis.