Recombinant Protein Technical Manual

Recombinant Human Urokinase/uPA Protein (His Tag)(Active)

RPES0745

Product Data:

Product SKU: RPES0745

Size: 10µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_002649.1

Protein Information:

Molecular Mass:	46 kDa
AP Molecular Mass:	18, 32 & 50 kDa
Tag:	C-His
Bio-activity:	Measured by its binding ability in a functional ELISA. Immobilized human uPA at 5 µg/ml (100 µl/well) can bind mouse PLAUR with a linear ranger of 1.6-40 ng/ml.
Purity:	> 97 % as determined by reducing SDS-PAGE.
Endotoxin:	< 1.0 EU per µg 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℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping:	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation:	Lyophilized from sterile PBS, pH 7.4
Reconstitution:	Please refer to the printed manual for detailed information.
Application:	Functional ELISA
Synonyms:	Urokinase-Type Plasminogen Activator; U-Plasminogen Activator; uPA;PLAU;ATF;BDPLT5;QPD;u-PA;UPA;URK

Immunogen Information:

Sequence: Met 1-Leu 431

Background:

Plasminogen activator, urokinase, also known as PLAU and uPA, is a serine protease which converts plasminogen to plasmin, a broad-spectrum protease active on extracellular matrix (ECM) components. It is involved in complement activation, cell migration, wound healing, and generation of localized extracellular proteolysis during tissue remodelling, pro-hormone conversion, carcinogenesis and neoplasia. Like many components of the blood coagulation, fibrinolytic and complement cascades, uPA has a modular structure, including three conserved domains: a growth factor-like domain (GFD, residues 1-49), a kringle domain (residues 5031), linked by an interdomain linker or "connecting peptide" (CP, residues 13258) to the serine protease domain (residues 159-411). uPA and its receptor (uPAR) have been implicated in a broad spectrum of pathophysiological processes, including fibrinolysis, proteolysis, inflammation, atherogenesis and plaque destabilization, all of which are involved in the pathogenesis of MI (myocardial infarction). The role of uPA is not only linked to its action as an enzyme. In fact, the mere binding of uPA on the cell surface also brings about two events that broaden the spectrum of its biological functions: (1) a conformational change of the receptor, which, in turn, affects its interaction with other proteins; (2) a signal transduction which modulates the expression of apoptosis-related genes. Besides its applications as a thrombolytic agent and as a prognostic marker for tumors, uPA may provide the basis for other therapies, as the structure of the receptor-binding domain of uPA has become a model for the design of anti-cancer molecules. Because of the causal involvment of uPA in cancer invasion and metastasis, the blockade of uPA interactions and activity with specific inhibitors is of interest for novel strategies in cancer therapy.