Data Sheet (Cat.No.TMPY-01017)

TargetMol

uPAR/PLAUR Protein, Mouse, Recombinant (His & hFc)

General Information

Synonyms:	plasminogen activator, urokinase receptor;u-PAR;uPAR;Cd87
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Thr 297) of mouse PLAUR (NP_035243.1) precursor was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus. Predicted N terminal: Leu 24
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P35456-1
Molecular Weight:	58 kDa (predicted); 80-90 kDa (reducing condition, due to glycosylation)

QC Testing

Biological 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 range of 1.6-40 ng/ml.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Urokinase plasminogen activator (uPA) and/or its receptor (uPAR) are essential for metastasis, and overexpression of these molecules is strongly correlated with poor prognosis in a variety of malignant tumours. uPAR and uPA levels in both resected tumor tissue and plasma are of independent prognostic significance for patient survival in several types of human cancer. This system has classically been thought to drive tumor progression by mediating

directed extracellular proteolysis on the surface of migrating or invading cells, and intervening with this proteolysis by targeting uPAR has been proposed to represent a novel approach for inhibiting tumor progression. uPAR, also known as PLAUR or CD87, has been implicated in the growth, metastasis, and angiogenesis of several solid and hemotologic malignancies. uPAR is a highly glycosylated, 55-60kDa integral membrane protein linked to the plasma membrane by a glycosylphosphatidylinositol (GPI) anchor. It is part of a cell surface system that also consists of the serine protease uPA and several specific inhibitors (plasminogen activator inhibitors 1 and 2). Additionally, the analysis of CD87 (urokinase-type plasminogen activator receptor - uPAR) expression has a potential role in the diagnostic or prognostic work-up of several hematological malignancies, particularly acute leukemia and multiple myeloma.

Reference

Romer J,et al.(2004) The urokinase receptor as a potential target in cancer therapy. Curr Pharm Des. 10(19): 2359-76.

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Pillay V,et al.(2007) The urokinase plasminogen activator receptor as a gene therapy target for cancer. Trends Biotechnol. 25(1): 33-9.

Mazar AP. (2008) Urokinase plasminogen activator receptor choreographs multiple ligand interactions: implications for tumor progression and therapy. Clin Cancer Res. 14(18): 5649-55.