Biotinylated Recombinant Human uPAR His-tag Avi-tag

Catalog Number: AVI807

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human uPAR protein

Human uPAR (Leu23-Arg303) Accession # Q03405.1	HHHHHH	Avi-tag

N-terminus C-terminus

N-terminal Sequence Analysis	Leu23
Structure / Form	Biotinylated via Avi-tag
Predicted Molecular Mass	29 kDa

SPECIFICATIONS

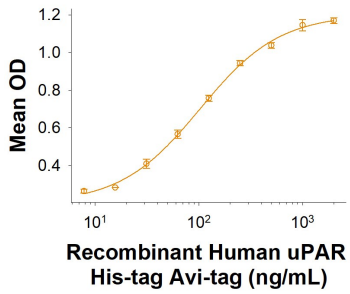
SDS-PAGE	47-54 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human u-Plasminogen Activator (uPA)/Urokinase (Catalog # 1310-SE) is immobilized at 5 µg/mL (100 µL/well), the concentration of Recombinant Human uPAR His-tag Avi-tag (Catalog # AVI807) that produces 50% of the optimal binding response is 40-240 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 1 mg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

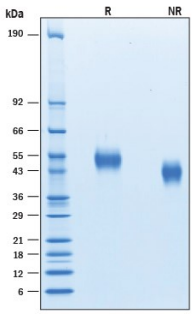
DATA

Binding Activity



When Recombinant Human u-Plasminogen Activator (uPA)/Urokinase (Catalog # 1310-SE) is immobilized at 5 µg/mL (100 µL/well), Recombinant Human uPAR His-tag Avi-tag (Catalog # AVI807) binds with an ED_{50} of 40-240 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Human uPAR His-tag Avi-tag (Catalog # AVI807) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 47-54 kDa.

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BACKGROUND

The urokinase-type Plasminogen Activator (uPA) is one of two activators that converts the extracellular zymogen plasminogen to plasmin, a serine protease that is involved in a variety of normal and pathological processes that require cell migration and/or tissue destruction. uPA is synthesized and released from cells as a single-chain (sc) pro-enzyme with limited enzymatic activity and is converted to an active two-chain (tc) disulfide-linked active enzyme by plasmin and other specific proteinases. Both the scuPA and tcuPA bind with high-affinity to the cell surface via the glycosyl phosphatidylinositol-linked receptor uPAR which serves to localize the uPA proteolytic activity. The enzymatic activity of scuPA has also been shown to be enhanced by binding to uPAR. Independent of their proteolytic activity, the uPA/uPAR interaction also initiates signal transduction responses resulting in activation of protein tyrosine kinases, gene expression, cell adhesion, and chemotaxis. uPAR can interact with integrins to suppress normal integrin adhesive function and promote adhesion to vitronectin through a high affinity vitronectin binding site on uPAR. uPAR cDNA encodes a 335 amino acid (aa) residue precursor protein with a 22 aa residue signal peptide, five potential N-linked glycosylation sites and a C-terminal GPI-anchor site. An alternate spliced variant of uPAR encoding a secreted soluble form of uPAR also exists. Human and mouse uPAR share approximately 60% aa sequence identity and the receptor-ligand interaction is strictly species-specific.

References:

1. Dear, A.E. and R.L. Medcalf, Eur. J. Biochemistry (1998) **252:**185.

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