

**DESCRIPTION**

<b>Source</b>	Chinese Hamster Ovary cell line, CHO-derived human Tyro3/Dtk protein Ala41-Ser428, with a C-terminal 6-His tag Accession # Q06418.1
<b>N-terminal Sequence Analysis</b>	Ala41
<b>Structure / Form</b>	Disulfide-linked homodimer
<b>Predicted Molecular Mass</b>	42 kDa

**SPECIFICATIONS**

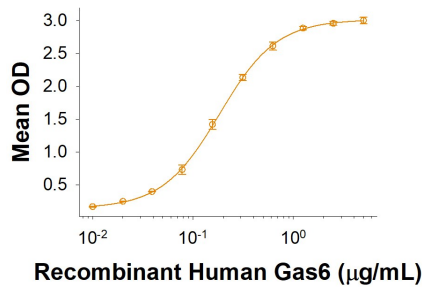
<b>SDS-PAGE</b>	63-71 kDa, under reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Recombinant Human Tyro3/Dtk His-tag (Catalog # 10365-DK) is immobilized at 0.5 µg/mL (100 µL/well), it binds to Recombinant Human Gas6 (Catalog # 885-GSB) with an ED <sub>50</sub> of 0.075-0.45 µg/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 500 µg/mL in PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

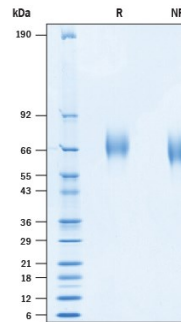
**DATA**

**Binding Activity**



When Recombinant Human Tyro3/Dtk His-tag Protein (Catalog # 10365-DK) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human Gas6 (Catalog # 885-GSB) binds with an ED<sub>50</sub> of 0.075-0.45 µg/mL.

**SDS-PAGE**



2 µg/lane of Recombinant Human Tyro3/Dtk His-tag (Catalog # 10365-DK) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 63-71 kDa.

**BACKGROUND**

Axl (Ufo, Ark), Dtk (Sky, Tyro3, Rse, Brt) and Mer (human and mouse homologues of chicken c-Eyk) constitute a new receptor tyrosine kinase subfamily (1, 2). The overall genomic structure of Dtk is virtually identical to that determined for the human UFO gene. This particular genomic organization is likely to have been duplicated and closely maintained throughout evolution (3). The extracellular domain of these proteins contain two Ig-like motifs and two fibronectin type III motifs. This characteristic topology is also found in neural cell adhesion molecules and in receptor tyrosine phosphatases (1). All three receptors bind the vitamin K-dependent protein growth-arrest specific gene 6 (Gas6) which is structurally related to the anti-coagulation factor protein S (1, 2). The binding affinities for Gas6 is in the order of Axl > Dtk > Mer (1). Gas6 binding induces tyrosine phosphorylation and down-stream signaling pathways that can lead to cell proliferation, migration, or the prevention of apoptosis (1, 2). Dtk is widely expressed during embryonic development. In adults, Dtk is predominantly expressed in neurons in restricted regions of the brain (4). The full length of Human DTK is 428 amino acids, with 387 amino acid signal sequence in the mature extracellular domain. The ECD of human DTK has 7 glycosylation sites. Within the ECD, human DTK shares 85% sequence identity with both mouse and rat DTK.

**References:**

1. Nagata, K. *et al.* (1996) *J. Biol. Chem.* **22**:30022.
2. Crosier, K.E. and P.S Crosier (1997) *Pathology* **29**:131.
3. Paula, M. *et al.* (1996) *Genomics* **31**:13.
4. Philip, S. *et al.* (1994) *Growth Factor* **11**:125.