Recombinant Human Gas6
Catalog Number: 885-GS

DESCRIPTION
Source Mouse myeloma cell line, NS0-derived
Ala49-Ala678, with a C-terminal 6-His tag
Accession # NP_000811

N-terminal Sequence Analysis Ala49
Predicted Molecular Mass 70.5 kDa

SPECIFICATIONS
SDS-PAGE 70-85 kDa, reducing conditions
Activity Measured by its ability to down regulate the expression of Axl in DU145 human prostate carcinoma cells. Mishra, A. et al. (2012) Mol. Cancer Res. 10:703. The ED_{50} for this effect is typically 25-150 ng/mL.
Endotoxin Level <1.0 EU per 1 µg of the protein by the LAL method.
Purity >90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation Lyophilized from a 0.2 µm filtered solution in Tris, NaCl and Citrate. See Certificate of Analysis for details.

PREPARATION AND STORAGE
Reconstitution Reconstitute at 100 µg/mL in sterile H_{2}O.
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.

BACKGROUND
Gas6 (Growth Arrest Specific 6) is a multimodular protein that is up-regulated by a wide variety of cell types in response to growth arrest (1). Gas6 and the structurally related Protein S are vitamin K-dependent and have an extensively γ-carboxylated N-terminal Gla domain, four EGF-like repeats, and a C-terminal region with homology to steroid hormone binding globulin (SHBG) (2). Human Gas6 is a 75 kDa protein that shares 77%-79% aa sequence identity with mouse and rat Gas6, and 43% aa identity with human protein S (over the region expressed). Alternate splicing generates isoforms that lack the Gla domain and/or the spacer between the EGF-like and SHBG regions. Gas6 binds and induces signaling through the receptor tyrosine kinases Axl, Dtk, and Mer (3-5). Human Gas6 interacts with both mouse and rat orthologs of these receptors (1). The full length isoform may be cleaved, resulting in release of the free SHBG region which can independently activate Axl (6). Shed soluble forms of Axl and Mer bind Gas6 and function as decoy receptors (7, 8). Gas6 induces a variety of responses, including prevention of apoptosis (9), cell proliferation (10), platelet mediated thrombosis (11), retinal epithelial cell phagocytosis of outer rod segments (12), inhibition of VEGF-induced endothelial cell chemotaxis (13), and the differentiation and expansion of NK cell precursors (14). The affinity of Gas6 for phosphatidylserine likely contributes to its role in promoting the phagocytosis of apoptotic cells (15). Several of these effects have been shown to require γ-carboxylation of the Gla domain (12, 16).

References: