

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Asp115-Pro673, with a C-terminal 6-His tag
Accession # CAA42507

N-terminal Sequence Analysis Asp115

Predicted Molecular Mass 62 kDa

SPECIFICATIONS

SDS-PAGE 72 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 ED₅₀ for this effect is 20-100 ng/mL.

Endotoxin Level <1.0 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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile 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.

BACKGROUND

Growth arrest-specific gene 6 (Gas6) was initially characterized as a gene whose expression was up-regulated in serum starved NIH 3T3 fibroblasts and whose expression is down-regulated during growth induction. Mouse Gas6 is a 673 amino acid protein that shares 81% identity to its human homologue. Gas6 is a member of the vitamin K-dependent family of proteins that includes human protein S, a negative coregulator in the blood coagulation pathway. Gas6 and protein S share structural motifs that characterize this family: an extensively γ-carboxylated amino terminus (Gla domain), four EGF-like repeats, and a carboxy terminus containing globular (G) domains with homology to steroid hormone-binding globulin. It is a ligand for the Axl (Ufo/Ark), Sky (Dtk/Tyro3/Rse/Brk/Tif), and Mer (Eyk) families of tyrosine kinase receptors. Gas6 binds to these receptors via tandem G domains at its C-terminus. Gas6 is ubiquitously expressed, but most abundantly in lung, intestine, bone marrow and endothelium.

Gas6 has been implicated in a variety of biological processes. It serves as a mitogen for fibroblasts, endothelial cells, neural cells, vascular smooth muscle cells and several tumor-derived cell lines. In addition, Gas6 prevents apoptosis, independent of its mitogenic activity. Gas6 is capable of inducing cell adhesion and chemotaxis in specific cell types. It also supports vitamin K-independent hematopoiesis when expressed by stromal cells. Gas6 signal transduction following Axl/Sky/Mer receptor activation has been reported to occur through such diverse signaling pathways as PI3K, MAP kinase, Src, Ras and β-catenin.

References:

1. Manfioletti, G. *et al.* (1993) Mol. Cell Biol. **13**:4976.
2. Goruppi, S. *et al.* (1996) Oncogene **12**:471.
3. Crosier, K and P. Crosier (1997) Pathology **29**:131.
4. Dormady, S. *et al.* (2000) Proc. Natl. Acad. Sci. USA **97**:12260.
5. Goruppi, S. *et al.* (2001) Mol. Cell Biol. **21**:902.