

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Gas6 in direct ELISAs and Western blots. In direct ELISAs and Western blots, this antibody shows approximately 5% cross-reactivity with recombinant mouse Gas6.
Source	Monoclonal Mouse IgG _{2A} Clone # 100127
Purification	Protein A or G purified from ascites
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Gas6 Asp118-Ala678 Accession # NP_000811
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human Gas6 (Catalog # 885-GS) under non-reducing conditions only

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Gas6 (Growth Arrest Specific 6) is a multimodular protein that is upregulated 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:

1. Hafizi, S. and B. Dahlback (2006) FEBS J. **273**:5231.
2. Manfioletti, G. *et al.* (1993) Mol. Cell Biol. **13**:4976.
3. Stitt, T.N. *et al.* (1995) Cell **80**:661.
4. Ohashi, K. *et al.* (1995) J. Biol. Chem. **270**:22681.
5. Nagata, K. *et al.* (1996) J. Biol. Chem. **271**:30022.
6. Goruppi, S. *et al.* (1997) FEBS Lett. **415**:59.
7. Sather, S. *et al.* (2007) Blood **109**:1026.
8. Budagian, V. *et al.* (2005) Mol. Cell. Biol. **25**:9324.
9. Shankar, S.L. *et al.* (2006) J. Neurosci. **26**:5638.
10. Yanagita, M. *et al.* (2002) J. Clin. Invest. **110**:239.
11. Gould, W.R. *et al.* (2005) J. Thromb. Haemost. **3**:733.
12. Hall, M.O. *et al.* (2002) Exp. Eye Res. **75**:391.
13. Gallicchio, M. *et al.* (2005) Blood **105**:1970.
14. Caraux, A. *et al.* (2006) Nat. Immunol. **7**:747.
15. Wu, Y. *et al.* (2005) J. Cell Sci. **118**:539.
16. Hasanbasic, I. *et al.* (2005) J. Thromb. Haemost. **3**:2790.