Human/Mouse Follistatin Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF669

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse Follistatin in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human (rh) Follistatin Gly30-Asp329 Accession # P19883
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

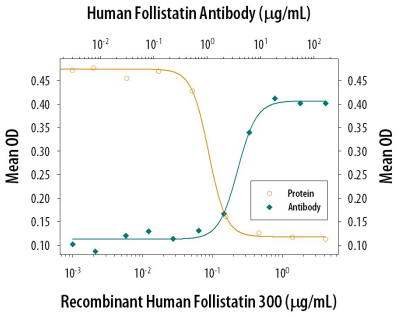
APPLICATIONS

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	0.1 µg/mL	Recombinant Human (rh) Follistatin 300 aa 30-329 (Catalog # 669-FO)
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize Follistatin inhibition of Activin A-dependent hemoglobin expression in the K562 human chronic myelogenous leukemia cell line. At 6 µg/mL, this antibody will neutralize >60% of rhFollistatin 300 bioactivity on K562 cells.	

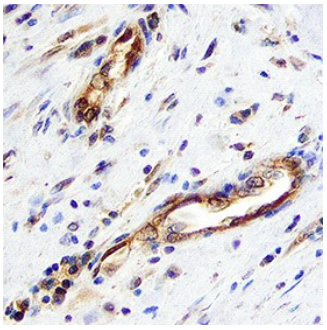
DATA

Neutralization



Follistatin Inhibition of Activin A-induced Hemoglobin Expression and Neutralization by Human Follistatin Antibody. Recombinant Human Follistatin 300 (Catalog # 669-FO) inhibits Recombinant Human/Mouse/Rat Activin A (Catalog # 338-AC) induced hemoglobin expression in the K562 human chronic myelogenous leukemia cell line in a dose-dependent manner (orange line), as measured by psuedoperoxidase activity. Inhibition of Recombinant Human/Mouse/Rat Activin A (7.5 ng/mL) activity elicited by Recombinant Human Follistatin 300 (0.4 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human/Mouse Follistatin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF669). At 6 µg/mL, this antibody will neutralize > 60% of rhFollistatin 300 bioactivity.

Immunohistochemistry



Follistatin in Human Breast. Follistatin was detected in immersion fixed paraffin-embedded sections of human breast using Goat Anti-Human/Mouse Follistatin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF669) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to epithelial cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.** ● 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.

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BACKGROUND

Follistatin (FS) was initially identified as a follicle-stimulating hormone inhibiting substance found in ovarian follicular fluid. It has since been shown that FS is a high-affinity activin-binding protein that can act as an activin antagonist. Two alternatively spliced follistatin mRNAs, encoding mature FS with 288 amino acid (aa) residues (FS-288) and 315 aa residues (FS-315), exist. Natural FS purified from porcine ovaries is primarily a carboxy-terminal truncated form of FS-315 composed of 300 aa residues. The recombinant human FS-300 produced at R&D Systems contains 301 aa residues and represents a molecular form derived from human FS-315 containing a truncation of 15 residues from the carboxy–terminus. FS-288 binds with high-affinity to cell-surface heparan sulfate proteoglycans whereas FS-315 binds with low-affinity. The binding affinity of R&D Systems' FS-300 to heparan sulfate has not been determined. Cell surface-associated FS has been suggested to play a role in the clearance and bioavailability of activin *in vivo*. Besides activin, FS has also been shown to bind with multiple BMPs and to inhibit BMP activity in early *Xenopus* embryos. FS deficient mice have been shown to have multiple embryonic defects that will result in death shortly after birth. Overexpression of FS can also cause reproductive defects in transgenic mice. Over aa 30-329, human Follistatin shares 97% aa identity with mouse Follistatin.

References:

1. Iemura, S. *et al.* (1998) Proc. Natl. Acad. Sci. USA **95**:9337
2. Guo, Q. (1998) Mol. Endocrinol. **12**:96
3. Hashimoto, O. *et al.* (1997) J. Biol. Chem. **272**:13835

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