ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Human Plasminogen Antibodies

Cat.# PLMN11-M Mouse monoclonal Anti-Human plasminogen protein IgG #3 **SIZE**: 100 ug
FORM: Soln Lyophilized

Cat. # PLMN11-C Recombinant Human plasminogen protein W. Blot +ve control **SIZE**: 100 ul
FORM: Soln Lyophilized

Embryonic vascular system undergoes a series of complex, highly regulated series of events involving differentiation, migration and association of primitive endothelial cells. This process is termed vasculogenesis. A further remodeling of the primitive vascular system forms the mature cardiovascular system. This process is known as angiogenesis (sprouting of new capillary vessels from pre-existing vasculature). Angiogenesis accounts for the formation of vasculature into previously avascular organs such as brain and kidney. Angiogenic activity in the adult is required during the normal tissue repair, and for the remodeling of the female reproductive organs (ovulation and placental development). Certain pathological conditions, such as tumor growth and diabetic retinopathy, also require angiogenesis.

Plasminogen prescursor or profibrinolysin or plasma trypsinogen (human 810 aa, chromosome 6q26) is synthesized in the kidney. It is present in plasma and many other extracellular fluids. Plasminogen is the zymogen in the circulating blood from which plasmin is formed. Plasminogen is a single-chain glycoprotein with 790 amino acid residues. Activation to the active form, plasmin, by urokinase involves cleavage at the arg-val bond between residues 560 and 561, resulting in the formation of the 2-chain plasmin molecule held together by 2 disulfide linkages. The heavier chain contains about 411 residues and the lighter chain about 233. The main function of plasmin is the digestion of fibrin in blood clots. Plasmin is a proteolytic enzyme with a specificity similar to that of trypsin. Like trypsin, plasmin belongs to the family of serine proteinases, in which the active site catalytic triad, his-57, asp-102, and ser-195 (chymotrypsin numbering), is situated in the light chain. The mature chain represents 20-810 aa. Processed active peptide domain is 20-97 aa. Angiostatin mature chain represents 98-810 aa. This regions contains 5 structurally related kringles domains K1-5 (Kringle 1, 103-181 aa; Kringle 2, 184-262 aa; Kringle 3, 275-352 aa; Kringle 4, 377-454 aa; Kringle 5, 481-560 aa). Each Kringle domain contains 6 conserved cysteines. Kringles 1-5 domains share approx 45-50% sequence homology.

Source of Antigen and Antibodies

Human plasma plasminogen was purified (95%) from human plasma protein that has been shown by certified tests to be negative for HbsAg and HIV and HCV. However, all precautions must be taken to avoid contamination. Purified plasminogen was injected into mice. A clone secreting antibodies ((gG1,k) to human plasminogen was expanded as ascites, and IgG (**cat # PLMN11-M**) purified by protein A/G column. It is supplied in 100 ul/vial in PBS pH 7.4, 0.1% BSA (liquid or lyophilized). No preservative is added. Reconstitute in PBS pH 7.4 or other buffers. Store powder at 4 oC. Reconstituted IgG should be aliquoted and stored frozen at –20oC or below.

Purified human plasminogen protein for WB +ve control, Cat # PLMN11-C, is formulated in SDS-PAGE sample buffer (reduced). This preparation is biologically inactive. It is not suitable for ELISA or other applications where native protein is required. It is supplied in 100 ul/vial. For WB, heat once and load 10 ul/lane and visualize with appropriate antibodies. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Plasminogen protein is ~90 kda. Store frozen in suitable aliquots. Do not freeze, thaw, or hear repeatedly.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul	50 ug/50 ul
solution	lyophilized powder

Reconstitute powder in the original vol. of water.

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-5 ug/ml for IgG pure using Chemiluminescence technique).

ELISA (0.5-2.0 ug antibody and 10-50 ng of control antigen/well).

Specificity & Cross-reactivity

Antibody crossreactivity in various species is not established. Human plasminogen W. blot +ve control (Cat #PLMN11-C) should be used as a control.

General References: Petersen, T. E.; (1990) *J. Biol. Chem.* 265: 6104-6111; Forsgren, M (1987) *FEBS Lett.* 213: 254-260; Degen, S. J. F(1990). *Genomics* 8: 49-61; Hobart, M. J. (1979) *Ann. Hum. Genet.* 42: 419-423, 1979.

Citations of ADI's antibodies for Angiotensin (see updated list at www.4adi.com \flr\angiogeninflr.html)

*This product is for in vitro research use only.

Related material available from ADI

Antibodies to Ang-1, Ang-2, Angiostatin, Endostatin

Recombinant Mouse and Human VEGFs, Anti-Tie-1 and Tie-2, Anti-flk-1, Flt-1, and Flt-4 (VEGFRs 1-3)

Western Blot recycling kit (Use the same blot to probe with multiple antibodies Ang-1 and Ang-2, etc.)

PLMN11-M 60615A

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