

Product Data Sheet

**Human alpha 1 antichymotrypsin (ACT) Protein and Antibodies**

□ Cat. # ACT12-M	Mouse Monoclonal Anti- Human alpha 1 antichymotrypsin (ACT) protein IgG, aff pure	<b>SIZE:</b> 100 ug
□ Cat. # ACT11-C	Purified Human alpha 1 antichymotrypsin (ACT) protein control for WB	<b>SIZE:</b> 100 ul

Alpha 1-antichymotrypsin is an alpha globulin glycoprotein that is a member of the serpin superfamily. It inhibits the activity of certain enzymes called proteases, such as cathepsin G that is found in neutrophils, and chymases found in mast cells, by cleaving them into a different shape or conformation. This activity protects some tissues, such as the lower respiratory tract, from damage caused by proteolytic enzymes. This protein is produced in the liver, and is an acute phase protein that is induced during inflammation. Deficiency of this protein has been associated with liver disease. Mutations have been identified in patients with Parkinson disease and chronic obstructive pulmonary disease. Alpha 1-antichymotrypsin is also associated with the pathogenesis of Alzheimer's disease as it enhances the formation of amyloid-fibrils in this disease.

**Source of Antigen and Antibodies**

<b>Antigen</b>	Highly purified human alpha 1 antichymotrypsin (ACT) protein
<b>Ab Host/type</b>	Mouse, monoclonal ascites # <b>ACT12-M</b> (isotype IgG1k) supplied in n PBS, PH 7.4, 0.1% BSA
<b>2-Ab</b>	Cat # 40320, goat anti-mouse IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve</b>	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Isotype Controls**

Catalog#	ProdDescription
20102-101	Mouse IgG1 isotype control, purified
20102-101-1	Mouse IgG1 isotype control, purified
20102-101-APC	Mouse IgG1-APC conjugate (isotype control)
20102-101-B	Mouse IgG1-Biotin conjugate (isotype control)
20102-101-F	Mouse IgG1-FITC conjugate (isotype control)
20102-101-FP	Mouse IgG1-FITC-PE conjugate
20102-101-HP	Mouse IgG1-HRP conjugate (isotype control)
20102-101-PC5	Mouse IgG1-PE-Cy5 conjugate
20102-101-PE	Mouse IgG1-PE conjugate (isotype control)

#ACT12, Western blot control

Highly purified native human ACT was purified from plasma (>99%, mol wt ~68 kda) and used for control. For Western blot +ve control (**Cat # ACT11-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of #**ACT11-C** for good visibility with antibody Cat # **ACT12-S** or #**ACT11-S** other antibodies. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **ACT12-C** solution prior to heating and loading on

gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

**Storage**

**Short-term:** unopened, undiluted liquid 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.

**Recommended usage**

**ELISA-use** at 0.1-1 ug/ml as detection antibody

**Western-use** at 0.2-2 ug/ml using ECL and 20-100 ng antigen per well.

**Immunohistochemistry**-Not tested.

**Specificity & Cross-reactivity**

The ACT12-M reacts with human ACT. It has no reactivity with alpha-1-antitrypsin. Antibody cross-reactivity in various species has not been studied. Purified human ACT protein (#ACT11-C) is available for control studies.

**References:** Kalsheker N (1996) Int. J. Biochem. Cell Biol. 28 (9): 961-4; Janciauskiene S (1999) Bioessays 20 (12): 1039-46; Kalsheker N (2002) Biochem. Soc. Trans. 30 (2): 93-8; Kroczyńska, Barbara; (2004) J. Biol. Chem. 279 (12): 11432-43.

For in vitro research use only

**Related Material available for ADI**

Sheep-Poly ACT11-A Anti-Human alpha 1 antichymotrypsin (ACT) IgG, aff pure

Mouse-Mono ACT12-M Monoclonal Anti-Human alpha 1 antichymotrypsin (ACT) IgG, aff pure

ACT11-C Purified Human alpha 1 antichymotrypsin (ACT) protein control for WB

Anti-Rabbit HRP conjugates; Anti-Mouse, human, rat, and Monkey IgG-HRP and subsotype specific conjugates

**Western blot recycling kit** (Use the same blot/strip to probe with multiple antibodies,

Chemiluminescence Substrates and Western blot kits (save by complete kit that includes Anti-rabbit IgG-HRP conjugate, blocking buffer, wash buffer, and Chemiluminescence Substrates for processing 15-30 std size blots).

ACT12-M 140928A

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