

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Serpin A3/ $\alpha$ 1-Antichymotrypsin in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Serpin A3/ $\alpha$ 1-Antichymotrypsin Asn26-Ala423 Accession # P01011
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m 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 $\mu$ m 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
<b>Western Blot</b>	0.1 $\mu$ g/mL	Recombinant Human Serpin A3/ $\alpha$ 1-Antichymotrypsin (Catalog # 1295-PI)
<b>Immunoprecipitation</b>	25 $\mu$ g/mL	Conditioned cell culture medium spiked with Recombinant Human Serpin A3/ $\alpha$ 1-Antichymotrypsin (Catalog # 1295-PI), see our available Western blot detection antibodies

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Serpin A3 is a member of the Serpin superfamily of the serine protease inhibitors (1). It is synthesized primarily in the liver and secreted as one of the most abundant serpins in plasma (2). It is known to inhibit several serine proteases including chymotrypsin, cathepsin G, chymase, kallikrein 3/prostate specific antigen, and unidentified ectoenzymes that process pro-macrophage stimulating protein (1-5). Serpin A3 is a major constituent of the plaques associated with Alzheimer's disease and an inhibitor of amyloid beta peptide degradation (1-6). Deficiency in Serpin A3 activity due to a point mutation (Leu55Pro) is associated with chronic obstructive pulmonary disease (7). Human Serpin A3 is synthesized as a 423 amino acid precursor (8, 9). The mature protein is secreted and has two forms that differ in their N-termini (10). One of the forms starting at Asn26 was expressed and purified.

### References:

1. Silverman, G.A. *et al.* (2001) J. Biol. Chem. **276**:33293.
2. Kalsheker, N. *et al.* (2002) Biochem. Soc. Trans. **30**:93.
3. Duranto, J. *et al.* (1998) Biochemistry **37**:11239.
4. Hsieh, M.-C. and B.S. Cooperman (2002) Biochemistry **41**:2990.
5. Skeel, A. and E.J. Leonard (2001) J. Biol. Chem. **276**:21932.
6. Abraham, C.R. *et al.* (2000) Ann. N. Y. Acad. Sci. **920**:245.
7. Gooptu, B. *et al.* (2000) Proc. Natl. Acad. Sci. USA **97**:67.
8. Chandra, T. *et al.* (1983) Biochemistry **22**:5055.
9. Morii, M. and J. Travis (1983) J. Biol. Chem. **258**:12749.
10. Lindmark, B. *et al.* (1989) Biochim. Biophys. Acta **997**:90.