

## DESCRIPTION

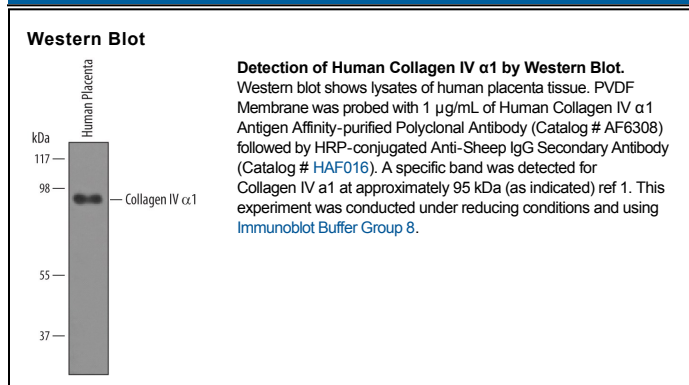
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Collagen IV $\alpha$ 1 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse COL13A1, recombinant human (rh) COL25A1 and rhCOL23A1 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Collagen IV $\alpha$ 1 Ser1441-Thr1669 Accession # P02462
<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 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>	1 $\mu$ g/mL	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<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 $^{\circ}$ 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 <math>^{\circ}</math>C as supplied.</li> <li>● 1 month, 2 to 8 <math>^{\circ}</math>C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 <math>^{\circ}</math>C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

COL4A1 (collagen 4-alpha 1) is a calculated 185 kDa (ref. 1) member of the type IV collagen family. It is a secreted glycoprotein that is expressed by multiple cell types, including fibroblasts, keratinocytes, and endothelial cells. Two COL4A1 molecules interact with a 170 kDa alpha 2 chain to form a collagen IV triple helix. This helix further interacts with other helices to generate covalent oligomers that form a scaffold in the basement membrane. Mature human COL4A1 is 1642 amino acids (aa) in length (SwissProt #:P02462). It has an N-terminal "7S" proregion (aa 28-172), a central collagenous domain that contains multiple Gly-based repeats (aa 173-1440), and a C-terminal domain that is proteolytically cleaved to generate a 25-28 kDa NC1 globular segment that has potent antiangiogenic activity (aa 1441-1669). Multiple splice forms exist. One shows a deletion of aa 499-849, a second shows a seven aa substitution for aa 513-1669, and a third shows a seven aa substitution for aa 958-1669. Over aa 1441-1669, human COL4A1 shares 97% aa sequence identity to mouse COL4A1. AF6308 detects a 95 kDa band, endogenous COL4A1 by Western blot in human placenta tissue sample, which is consistent with the current literature (ref. 1)

### References:

1. Protein Science (2006), 15:2805-2815.