

**Goat Anti-P4HA1 Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1772a****Specification**

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**Goat Anti-P4HA1 Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">P13674</a>
Other Accession	<a href="#">NP_001017962</a> , <a href="#">5033</a> , <a href="#">18451 (mouse)</a> , <a href="#">64475 (rat)</a>
Reactivity	Human
Predicted	Mouse, Rat, Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	61049

**Goat Anti-P4HA1 Antibody - Additional Information****Gene ID** 5033**Other Names**

Prolyl 4-hydroxylase subunit alpha-1, 4-PH alpha-1, 1.14.11.2, Procollagen-proline, 2-oxoglutarate-4-dioxygenase subunit alpha-1, P4HA1, P4HA

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-P4HA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-P4HA1 Antibody - Protein Information****Name** P4HA1**Synonyms** P4HA**Function**

Catalyzes the post-translational formation of 4- hydroxyproline in -Xaa-Pro-Gly- sequences in collagens and other proteins.

**Cellular Location**

Endoplasmic reticulum lumen.

**Tissue Location**

Expressed in the heart, liver, skeletal muscle, kidney, placenta, lung and pancreas.

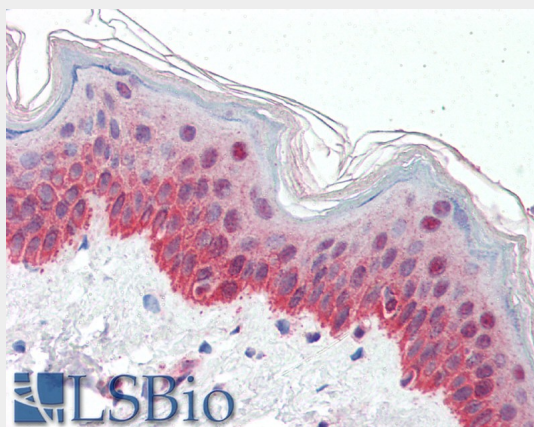
**Goat Anti-P4HA1 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

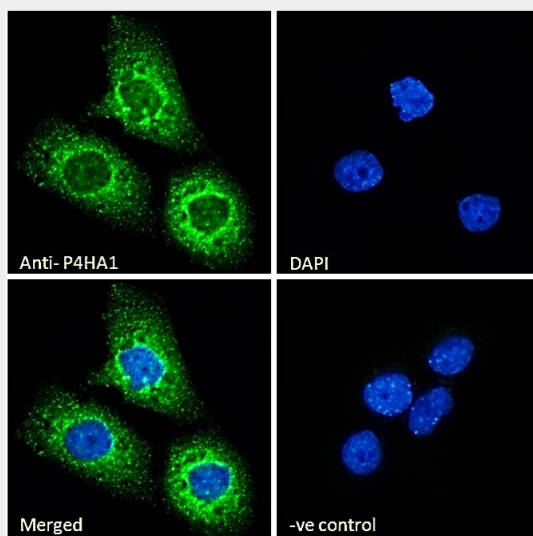
**Goat Anti-P4HA1 Antibody - Images**

AF1772a (0.2 µg/ml) staining of HEK293 cell lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

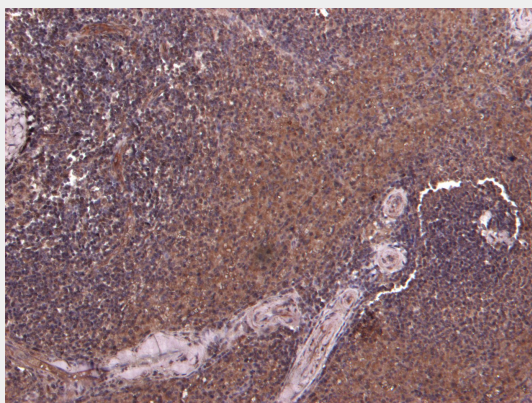


EB07666 (5µg/ml) staining of paraffin embedded Human Skin. Steamed antigen retrieval with

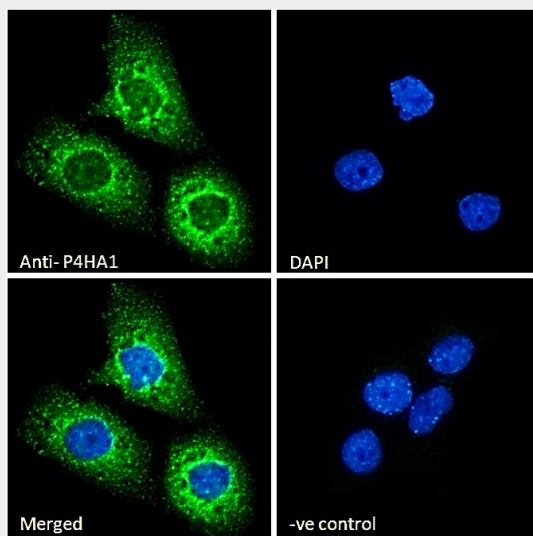
citrate buffer pH 6, AP-staining. **This data is from a previous batch, not on sale.**



EB07666 Immunofluorescence analysis of paraformaldehyde fixed A431 cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml), showing endoplasmic reticulum and cytoplasmic staining. T

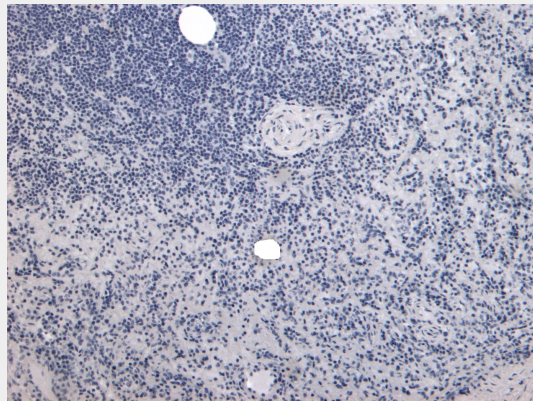


EB07666 (7μg/ml) staining of paraaffin embedded Human Spleen. Heat induced antigen retrieval with citrate buffer pH 6, HRP-staining.



EB07666 Immunofluorescence analysis of paraformaldehyde fixed A431 cells, permeabilized with

0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml), showing endoplasmic reticulum and cytoplasmic staining. T



EB07666 Negative Control showing staining of paraffin embedded Human Spleen, with no primary antibody.

### **Goat Anti-P4HA1 Antibody - Background**

This gene encodes a component of prolyl 4-hydroxylase, a key enzyme in collagen synthesis composed of two identical alpha subunits and two beta subunits. The encoded protein is one of several different types of alpha subunits and provides the major part of the catalytic site of the active enzyme. In collagen and related proteins, prolyl 4-hydroxylase catalyzes the formation of 4-hydroxyproline that is essential to the proper three-dimensional folding of newly synthesized procollagen chains. Alternatively spliced transcript variants encoding different isoforms have been described.

### **Goat Anti-P4HA1 Antibody - References**

Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. Mol Med, 2010 Jul-Aug. PMID 20379614.  
Stringency of the 2-His-1-Asp active-site motif in prolyl 4-hydroxylase. Gorres KL, et al. PLoS One, 2009 Nov 5. PMID 19890397.  
Toward a confocal subcellular atlas of the human proteome. Barbe L, et al. Mol Cell Proteomics, 2008 Mar. PMID 18029348.  
The length of peptide substrates has a marked effect on hydroxylation by the hypoxia-inducible factor prolyl 4-hydroxylases. Koivunen P, et al. J Biol Chem, 2006 Sep 29. PMID 16885164.  
Regulation of type II collagen synthesis during osteoarthritis by prolyl-4-hydroxylases: possible influence of low oxygen levels. Grimmer C, et al. Am J Pathol, 2006 Aug. PMID 16877351.