Anti-COMP Antibody [A10H2]

HA601354

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 83 kDa
Clone number:	A10H2

Description: Cartilage oligomeric matrix protein (COMP), also known as thrombospondin-5, is an extracellular matrix (ECM) protein primarily present in cartilage. In humans it is encoded by the COMP gene. The protein encoded by this gene is a noncollagenous extracellular matrix (ECM) protein. It consists of five identical glycoprotein subunits, each with EGF-like and calcium-binding (thrombospondin-like) domains. Oligomerization results from formation of a five-stranded coiled coil and disulfide bonds. Binding to other ECM proteins such as collagen appears to depend on divalent cations. Mutations can cause the osteochondrodysplasias pseudoachondroplasia (PSACH) and multiple epiphyseal dysplasia (MED). COMP is a marker of cartilage turnover. It is present in high quantities in fibrotic scars and systemic sclerosis, and it appears to have a role in vascular wall remodeling.

Immunogen: Synthetic peptide within human COMP aa 321-370.

Positive control: Mouse articular cartilage tissue lysate, Rat articular cartilage tissue lysate, HCT 116 cell lysate, mouse cartilage tissue, rat cartilage tissue.

Subcellular location: Secreted, extracellular space, extracellular matrix.

Database links: SwissProt: P49747 Human | Q9R0G6 Mouse | P35444 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:400

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

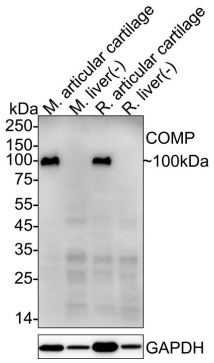

Fig1: Western blot analysis of COMP on different lysates with Mouse anti-COMP antibody (HA601354) at 1/1,000 dilution.

Lane 1: Mouse articular cartilage tissue lysate (40 µg/Lane)
Lane 2: Mouse liver tissue lysate (negative) (40 µg/Lane)
Lane 3: Rat articular cartilage tissue lysate (40 µg/Lane)
Lane 4: Rat liver tissue lysate (negative) (40 µg/Lane)

Predicted band size: 83 kDa
Observed band size: 100 kDa

Exposure time: 3 minutes; ECL: K1802;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601354) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

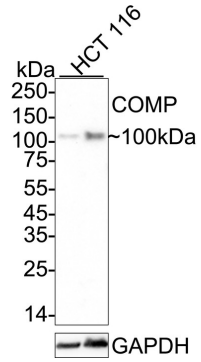

Fig2: Western blot analysis of COMP on different lysates with Mouse anti-COMP antibody (HA601354) at 1/1,000 dilution.

Lane 1: HCT 116 cell lysate (15 µg/Lane)
Lane 2: HCT 116 cell lysate (30 µg/Lane)

Predicted band size: 83 kDa
Observed band size: 100 kDa

Exposure time: 3 minute; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601354) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

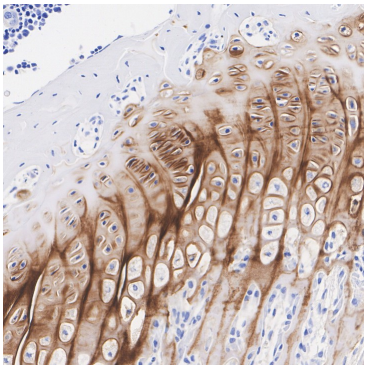

Fig3: Immunohistochemical analysis of paraffin-embedded mouse cartilage tissue with Mouse anti-COMP antibody (HA601354) at 1/400 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) in water bath overnight. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601354) at 1/400 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

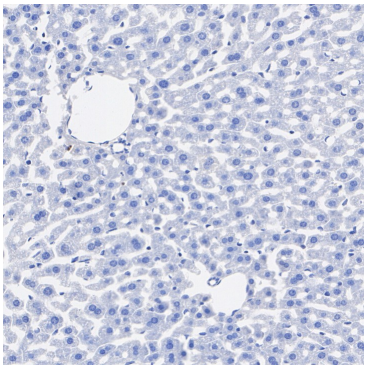

Fig4: Immunohistochemical analysis of paraffin-embedded mouse liver tissue (negative) with Mouse anti-COMP antibody (HA601354) at 1/100 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) in water bath overnight. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601354) at 1/100 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

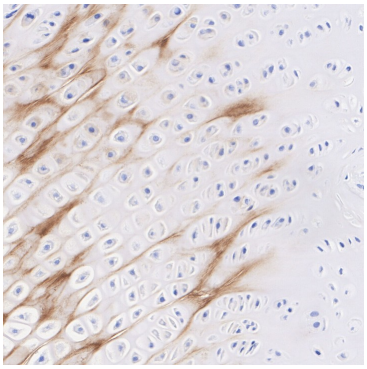

Fig5: Immunohistochemical analysis of paraffin-embedded rat cartilage tissue with Mouse anti-COMP antibody (HA601354) at 1/400 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) in water bath overnight. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601354) at 1/400 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

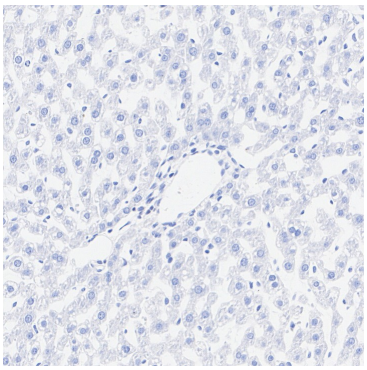

Fig6: Immunohistochemical analysis of paraffin-embedded rat liver tissue (negative) with Mouse anti-COMP antibody (HA601354) at 1/100 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) in water bath overnight. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601354) at 1/100 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Cai X et al. COMP Improves Ang-II-Induced Atrial Fibrillation via TGF-beta Signaling Pathway. Cardiovasc Toxicol. 2023 Oct
2. Wang Y et al. COMP promotes pancreatic fibrosis by activating pancreatic stellate cells through CD36-ERK/AKT signaling pathways. Cell Signal. 2024 Jun