Human Collagen IV α1 Antibody

Monoclonal Mouse IgG_1 Clone # 577238

Catalog Number: MAB6308

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Collagen IV α1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Collagen I alpha 1, III alpha 1, XIII alpha 1v4, XXIII alpha 1, or recombinant mouse Collagen XXV alpha 1 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 577238
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Collagen IV α1 Ser1441-Thr1669 Accession # P02462
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

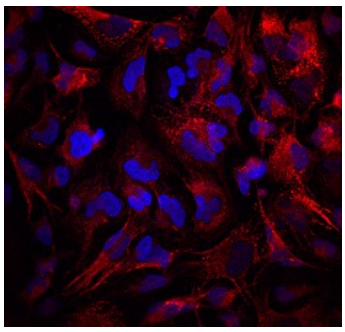
APPLICATIONS

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
Immunocytochemistry	8-25 µg/mL	See Below

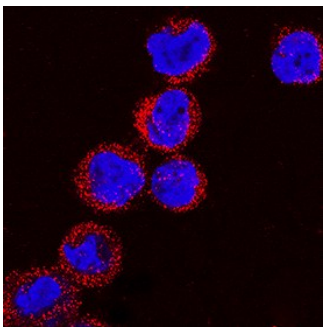
DATA

Immunocytochemistry



Collagen IV α1 in T98G Human Cell Line. Collagen IV α1 was detected in immersion fixed T98G human glioblastoma cell line using Mouse Anti-Human Collagen IV alpha 1 Monoclonal Antibody (Catalog # MAB6308) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to perinuclear areas and cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunocytochemistry



Collagen IV α1 in THP-1 Human Cell Line. Collagen IV α1 was detected in immersion fixed THP-1 human acute monocytic leukemia cell line using Mouse Anti-Human Collagen IV α1 Monoclonal Antibody (Catalog # MAB6308) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	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
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

COL4A1 (collagen IV α1) is a 185 kDa 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 α2 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. 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 is 97% aa identical to mouse COL4A1.

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