

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Collagen IV $\alpha 1$ 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 $\alpha 1$ Ser1441-Thr1669 Accession # P02462
Formulation	Lyophilized from a 0.2 μ 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 μ m filtered solution in PBS.

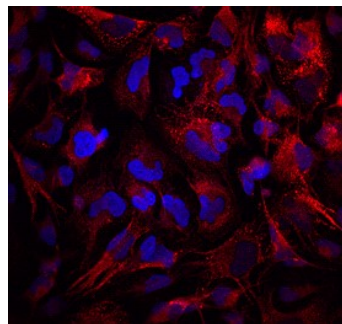
APPLICATIONS

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
Immunocytochemistry	8-25 μ g/mL	See Below

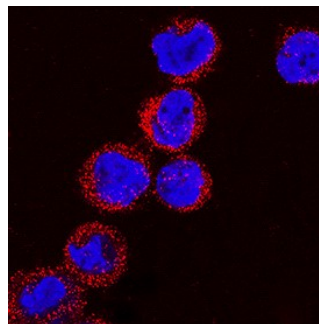
DATA

Immunocytochemistry



Collagen IV $\alpha 1$ in T98G Human Cell Line. Collagen IV $\alpha 1$ was detected in immersion fixed T98G human glioblastoma cell line using Mouse Anti-Human Collagen IV alpha 1 Monoclonal Antibody (Catalog # MAB6308) at 10 μ g/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 $\alpha 1$ in THP-1 Human Cell Line. Collagen IV $\alpha 1$ was detected in immersion fixed THP-1 human acute monocytic leukemia cell line using Mouse Anti-Human Collagen IV $\alpha 1$ Monoclonal Antibody (Catalog # MAB6308) at 8 μ g/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. <ul style="list-style-type: none"> 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 $\alpha 1$) 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 $\alpha 2$ 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. 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.