

# CD55 (Extracellular region)

Mouse Monoclonal IgG1

Cat. # CM0331

Size 100 µl

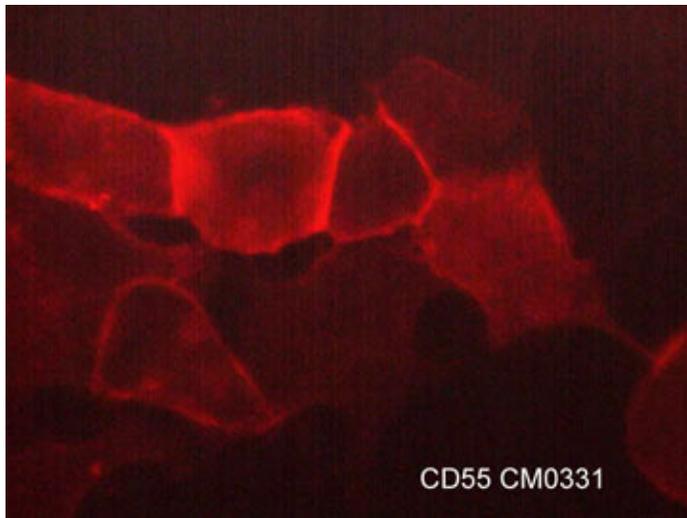
## Background

CD55, also known as Decay-Accelerating Factor (DAF) is an inhibitor of the complement system, and is broadly expressed in malignant tumors. In cancer, CD55 has been implicated in tumorigenesis, neoangiogenesis, and metastasis. CD55 may decrease complement mediated tumor cell lysis, inhibit tumor apoptosis, and promote invasive cancer cell motility. These roles in cancer may involve binding to the seven-span transmembrane receptor CD97. In neuroblastoma cells, CD55 contributes to growth of colonies and to invasion of cells, but not to stemness. In neuroblastoma cells, CD55 is upregulated in a small population of cells that are HIF-2 $\alpha$  positive. This CD55-positive subpopulation is highly invasive and has low adhesion to fibronectin and collagen. In addition, CD55 expression correlates with poor prognosis in neuroblastoma patients.

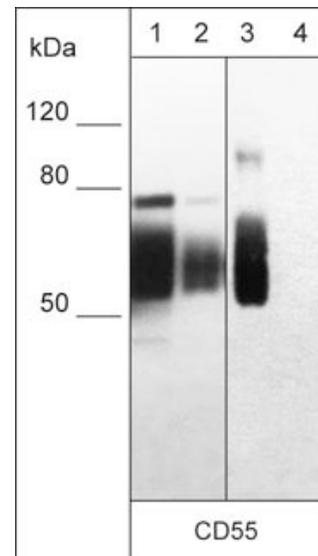
## Background References

Mikesch JH et al. (2006) Cell Oncol. 28(5-6):223.

Cimmino F et al. (2016) Oncogenesis 5:e212.



Immunocytochemical labeling of CD55 in paraformaldehyde fixed human MDA-MB-231 breast cancer cells. The cells were labeled with mouse monoclonal anti-CD55 (CM0331). The antibody was detected using goat anti-mouse DyLight® 594.



Native western blot analysis of human MDA-MB-231 breast cancer cell lysate (lanes 1 & 2), human recombinant CD55 extracellular region protein (lane 3), and CD44 extracellular region protein (lane 4). The blots were probed with mouse monoclonal anti-CD55 (CM0331) at 1:1000 (lane 1) and 1:4000 (lanes 2, 3, and 4).

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### Immunogen

Clone M033 was generated from a proprietary antigen related to the extracellular region of human CD55 from the MDA-MB-231 breast cancer cell line.

### Buffer and Storage

Mouse monoclonal antibody purified with protein G chromatography is supplied in 100 $\mu$ l phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at  $-20^{\circ}\text{C}$ . Stable for 1 year.

#### Applications

WB	1:1000
ELISA	1:2000
ICC	1:100
IP	1:50

#### Species Reactivity

Hu

End user should determine optimal dilution for their particular applications and experiments.

Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.

Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot  
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

### Specificity

Clone M033 was purified using Protein G chromatography. The antibody detects 75-100 kDa\* bands corresponding to the molecular mass of CD55 on SDS-PAGE immunoblots of "native" A431, HeLa, MCF7, and MDA-MB-231 cell lysates, but does not detect the denatured form of CD55. The antibody also detects a "native" human recombinant CD55 protein that includes the extracellular region. The antibody can be used for native western blot, immunoprecipitation, protein ELISA, and immunocytochemistry, as well for detecting CD55 in live, unfixed cells.

\*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.

"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

### Related Products

- CM0011 CD98 (Extracellular region) Mouse Monoclonal
- CM5881 CD44 (Hyaluron Binding Region) Mouse Monoclonal
- CM5911 CD44 (Hyaluron Binding Region) Mouse Monoclonal
- IK6270 Integrin  $\beta$ 4 Phospho-Regulation Antibody Sampler Kit
- IK6750 Integrin  $\alpha$  family Antibody Sampler Kit

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