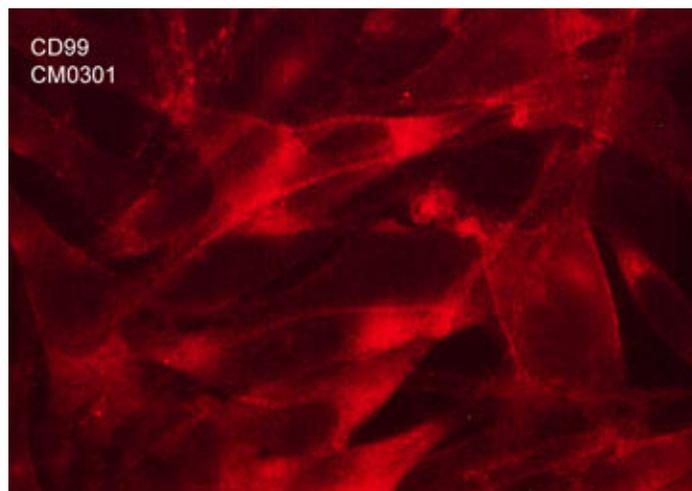


Background

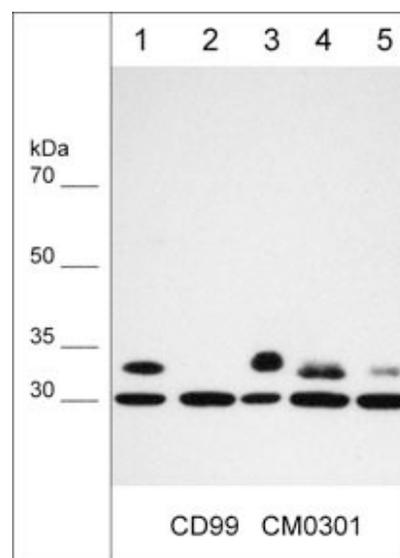
The glycosylated transmembrane protein CD99 is involved in many essential cellular functions including cell adhesion, migration, cell death, differentiation, and intracellular protein trafficking. The CD99 gene encodes two distinct proteins, type I is 32 kDa and type II is 28 kDa, which are a result of the alternative splicing of the cytoplasmic region. These CD99 isoforms are expressed in a cell-type-specific manner and may have distinct functions. CD99 is overexpressed in several types of sarcomas, lymphomas, gliomas, neuroendocrine tumors, and some breast cancers. In these tumors, CD99 may have oncogenetic functions that promote migration, invasion, and metastasis of tumor cells. However, other neoplasms, carcinomas, and sarcomas have CD99 expression in benign or early-stage tumors, but lower expression in the advanced-stage counterparts. In these tumors, CD99 may have oncosuppressor signaling, and its re-expression can lead to the reversal of malignancy. Thus, CD99 is an important membrane protein involved in many aspects of cell migration and adhesion in normal and diseased cells.

Background References

Manara MC, et al. (2018) *Genes (Basel)*. 9(3) pii: E159.
Pasello M, et al. (2018) *J Cell Commun Signal*. 12(1):55.



Immunocytochemical labeling of CD99 in paraformaldehyde fixed human MeWo cells. The cells were labeled with mouse monoclonal anti-CD99 (clone M030). The antibody was detected using goat anti-mouse DyLight® 594.



Western blot analysis of human cell lysates: A549 (lane 1), A431 (lane 2), LNCaP (lane 3), MDA-MB-231 (lane 4) and MeWo (lane 5). The blot was probed with mouse monoclonal anti-CD99 (CM0301) at 1:1000.

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Immunogen**Uniprot ID: P14209**

Clone M030 was generated from a proprietary antigen related to the extracellular region of human CD99 expressed in the MeWo melanoma cell line.

Buffer and Storage

Mouse monoclonal antibody purified with protein G chromatography is supplied in 100 µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications

WB	1:500
ELISA	1:2000
ICC	1:100
IP	1:100

Species Reactivity

Hu, Rt, Ms

Isotype: IgG1

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 M030 detects 30 and 32 kDa* bands corresponding to the molecular mass of the short and long forms of CD99 on SDS-PAGE immunoblots of human A431, LNCaP, MDA-MB-231, A549, and MeWo cell lysates, as well as mouse LL2 lung carcinoma. The antibody can be used for multiple applications including ELISA, western blot, immunocytochemistry, and immunoprecipitation. In addition, the antibody labels live, unfixed MeWo 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

CM0261 CD99 (Extracellular region) Mouse Monoclonal

CM0101 CD44 (Extracellular region) Mouse Monoclonal

CM0151 CD59 (glycoprotein) Mouse Monoclonal

CM0241 CD44 (Extracellular region) Mouse Monoclonal

CM0331 CD55 (Extracellular region) Mouse Monoclonal

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