



PRODUCT FOCUS -- Tools for the Diagnosis of Multiple Myeloma

Multiple Myeloma Cancer Awareness, 2025 – Multiple myeloma is a cancer of plasma cells. Normal plasma cells are found in the bone marrow and are a key component of the immune system. Current estimates for multiple myeloma in the United States for 2025: About 36,000 new cases will be diagnosed (~20,000 in men and ~16,000 in women) with ~12,000 deaths are expected to occur (~6,500 in men and ~5,500 in women). In the United States, the average lifetime risk of getting multiple myeloma is less than 1% – about 1 in 108 for men and 1 in 133 for women. (*American Cancer Society*)

Critical biomarkers used in the diagnosis of multiple myeloma, by Immunohistochemistry, include CD38, CD138, CD20 immunoglobulin light chains (kappa and lambda) and MUM1 (multiple myeloma oncogene 1). These tools help distinguish myeloma cells from normal plasma cells and can be used as prognostic indicators after treatment.

(Kumar et al., *Best Pract Res Clin Haematol.* 2010 Sep;23(3):433–451.); Iqbal F, Lyapichev KA. MUM1 / IRF4. *PathologyOutlines.com.* <https://www.pathologyoutlines.com/topic/stainsmum1.html>.)

Zeta Corporation offers recombinant RAbMono™ (Rabbit Monoclonal) and MonoMAb™ (Mouse Monoclonal) recombinant IVD antibodies researched and developed for the anatomic pathology market for Immunohistochemistry. Zeta is incorporating highly sensitive technology to develop many of these primary antibodies that are target-validated and characterized for IHC on FFPE tissue sections. Zeta provides 400+ IVD antibodies for cancer screening and diagnosis.

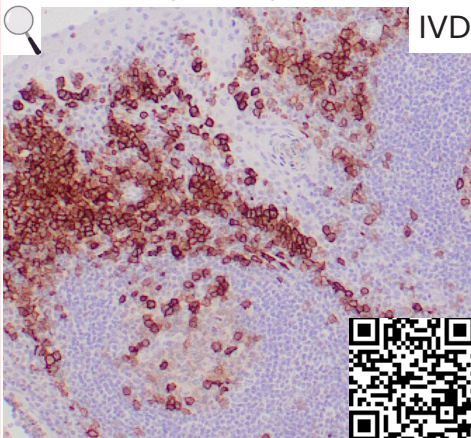
CD38 (clone ZR351)

Recombinant. CD38 is present on activated T-cells and terminally differentiated B-cells (plasma cells) and other reactive cells include NK cells, monocytes, macrophages and dendritic cells. CD38 may be detected on cells from multiple myeloma, acute lymphoblastic leukemia (B and T) and some acute myeloid leukemia. CD38 expression on myeloma cells has been correlated to anti-CD38 treatment response. In the future, CD38 expression may be used to monitor anti-CD38 therapy... [\(more\)](#)

Species: Rabbit Monoclonal

Cat#: Z2610

IHC: Human tonsil stained with ZR351. Note cytoplasmic staining of perifollicular and subepithelial plasma cells.



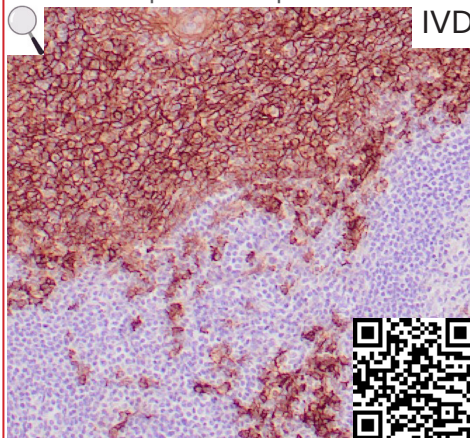
CD138 (clone ZR251)

CD138 is predominantly expressed on mature plasma cells and early pre B-cells, while other haematolymphoid cells are negative. Among haematolymphoid neoplasms, CD138 is expressed in practically all cases of plasma cell malignancies. Among non-hematolymphoid neoplasms, expression of CD138 is found in various types of carcinomas. Anti-CD138 is used to identify and assess plasma cells, particularly in the context of multiple myeloma. [\(more\)](#)

Species: Rabbit Monoclonal

Cat#: Z2490

IHC: Human tonsil stained with ZR251. Note cytoplasmic staining of plasma cells and squamous epithelium.



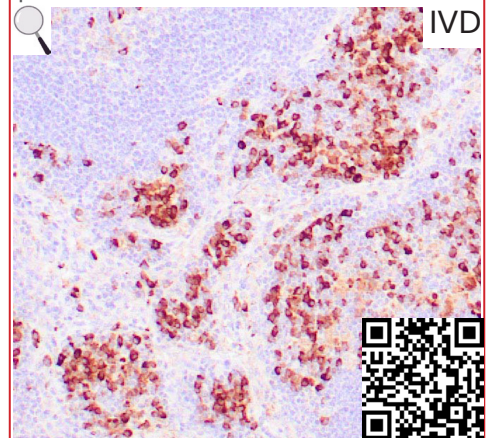
Kappa light chain (clone ZM81)

Recombinant. Monospecific for kappa light chain of immunoglobulin. The ratio of Kappa to Lambda is 70:30. However, with the occurrence of multiple myeloma or other B-cell malignancies this ratio is disturbed. The Kappa antibody also detects free kappa light chains. The Kappa light chain antibody is reportedly useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Demonstration of clonality in lymphoid infiltrates indicates that the infiltrate is malignant. [\(more\)](#)

Species: Mouse Monoclonal

Cat#: Z2532

IHC: Human tonsil stained with ZM81. Note the cytoplasmic staining of plasma cells.



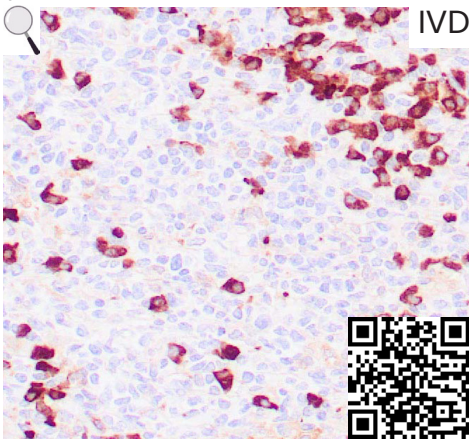
Lambda light chain (clone LcN-2)

Specific to lambda light chain of Ig and shows no cross-reaction with kappa light chain. The ratio of Kappa to Lambda is 70:30. However, with the occurrence of multiple myeloma or other B-cell malignancies this ratio is disturbed. The Lambda antibody (to the lambda light chain) is useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Demonstration of clonality in lymphoid infiltrates indicates that the infiltrate is malignant. [\(more\)](#)

Species: Rabbit Monoclonal

Cat#: [Z2457](#)

IHC: Human tonsil stained with LcN-2. Note the cytoplasmic staining of plasma cells.



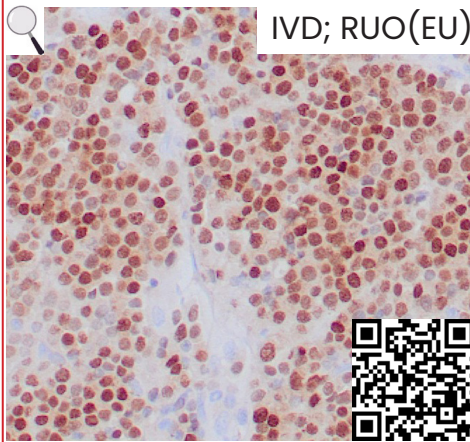
MUM1 (clone ZR411)

Recombinant. MUM1 (Multiple Myeloma oncogene 1) is useful in a panel with other markers for subclassifying malignant lymphomas and identifying plasma cell differentiation. MUM1 may help differentiate classic Hodgkin lymphoma (MUM1+) from nodular lymphocyte predominant Hodgkin lymphoma (MUM1-). MUM1 expression is associated with poor outcomes for diffuse large B cell lymphomas, myelomas, and peripheral T cell lymphomas. MUM1 can be helpful... [\(more\)](#)

Species: Rabbit Monoclonal

Cat#: [Z2767](#)

IHC: Human IgA myeloma stained with ZR411. Note the nuclear staining in tumor cells.



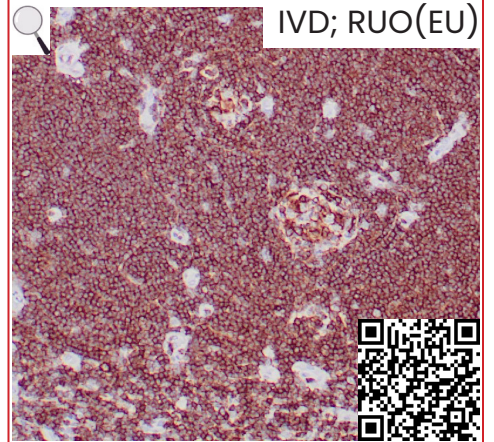
CD20 (clone ZR243)

Recombinant. Can be used for immunophenotyping of leukemia and malignant cells, B lymphocyte detection in peripheral blood, and B cell localization in tissues. The antibody is reliable for determining B-cell phenotype in known lymphoid tissues including rare CD20-positive T-cell lymphomas. The CD20 antibody reactivity has also been noted with Reed-Sternberg cells in cases of Hodgkin's disease, particularly of predominant lymphocyte type. Expression in multiple myeloma (MM) is a relatively rare - but important - finding. [\(more\)](#)

Species: Rabbit Monoclonal

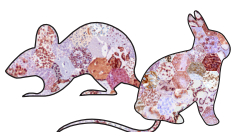
Cat#: [Z2717](#)

IHC: Human lymph node stained with ZR243. Note cell surface staining of B-cells.



Related Antibodies	Clone	Species	Cat. #
CD10	55C6	Mouse	Z2809
CD10	ZR468	Rabbit	Z2828
CD10	ZR329	Rabbit	Z2678
CD19	ZM179	Mouse	Z2481
CD19	ZR212	Rabbit	Z2547
CD20	L26	Mouse	Z2059
CD22	ZM183	Mouse	Z2496

Related Antibodies	Clone	Species	Cat. #
CD56	ZR421	Rabbit	Z2777
CD79a	JCB117	Mouse	Z2427
CD79a	ZR237	Rabbit	Z2533
IgM	ZR249	Rabbit	Z2723
Ki-67	MIB-1	Mouse	Z2305
Ki-67	ZM67	Mouse	Z2377
Ki-67	ZR433	Rabbit	Z2789



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