

IVMB0528

Product Information

Product SKU: IVMB0528	Clone: GA101	Target: CD20
Size: 50 µg		Isotype: Human IgG1κ

Additional Information

Reactivity: Human	Host Species: Human
Antibody Type: Biosimilar Recombinant Human Monoclonal Antibody	Expression Host: HEK-293 Cells

Immunogen Information

Background: CD20 is a nonglycosylated 33-37 kDa phosphoprotein member of the MS4A family which is widely expressed on normal B cell surfaces during all stages of development as well as by most B cell malignancies^{1,2}. The biological role of CD20 remains poorly understood; however, it is thought to be involved in calcium ion influx. CD20 has no natural ligand and is not immediately internalized upon antibody binding. Thus, mAbs directed against CD20 depend on the recruitment of a host response. Anti-CD20 mAbs bind to the 44 amino acid extracellular portion.

Obinutuzumab (GA101) is a new generation, type II, anti-CD20 antibody². Obinutuzumab was humanized by grafting the complementarity-determining sequences of murine IgG1-κ antibody B-Ly1 onto human VH and VL acceptor frameworks³. The Fc segment was glycoengineered to attach bisected, complex, nonfucosylated oligosaccharides to asparagine 297, leading to increased affinity to FcγRIII.

Obinutuzumab causes homotypic adhesion^{4,5,6}, induces direct cell death via largely caspase-independent mechanisms^{4,6,7,8,9}, does not localize into lipid rafts^{4,10,11}, displays half-maximal CD20 binding at saturating conditions⁷, and displays minimal complement dependent cytotoxicity⁷.

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Compared to rituximab, obinutuzumab recognizes a distinct but overlapping CD20 epitope, in a different orientation that results in increased pro-apoptotic potential^{12,13,14}. A modified elbow-hinge residue, characterized by a leucine to valine mutation at Kabat position 11, is key to superior phosphatidylserine exposure and cell death relative to rituximab³.

Product Concentration:	0.2 mg/ml
Applications:	ELISA
Synonyms:	Obinutuzumab, CD20, MS4A1
Antigen Distribution:	CD20 is a general B cell marker expressed by the majority of normal B cells in all stages of their development as well as by most B cell malignancies.
Immunogen:	Human lymphoblastoid cell line SB.
Formulation:	This R-phycoerythrin (R-PE) conjugate is formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.4, 1% BSA and 0.09% sodium azide as a preservative.
Specificity:	Obinutuzumab (GA101) activity is directed against human CD20.
Pathogen Testing:	-
Storage & Handling:	This R-phycoerythrin (R-PE) conjugate is stable when stored at 2-8°C. Do not freeze.