Mouse monoclonal antibody against
CD20 (Clone ISM003)

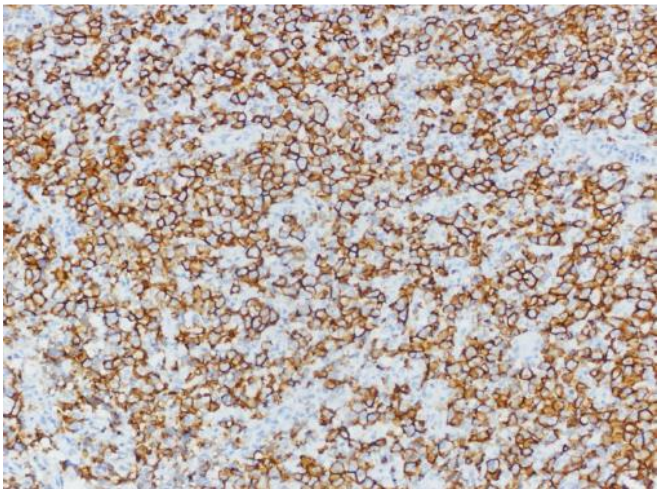


Figure 1 Human diffuse large B cell lymphoma stained with anti-CD20 antibody (ISM003).

Product identification

ISC025-R3	3 ml ready-to-use (RTU)
ISC025-R7	7 ml ready-to-use (RTU)
ISC025-C1	1 ml concentrated

Summary and explanation

The CD20 antigen is a membrane-embedded, non-glycosylated phosphoprotein, 33-37 kDa. CD20 functions as a Ca2+-permeable cation channel, involved in the regulation of B-cell activation, proliferation and differentiation. CD20 appears on the surface of the pre-B lymphocyte between the time of light chain rearrangement and expression of intact surface immunoglobulin and is lost just before terminal B-cell differentiation into plasma cells. Surface expression of CD20 on activated B cells is approximately 4-fold greater than that found on resting B cells.
CD20 is virtually specific for normal B-cells. A weak expression has been demonstrated in a subpopulation of T-cells, but not in any other cell type.

Principle of the procedure

The stated primary antibody is suitable for immunohistochemical staining of FFPE tissue sections based on specific antigen-antibody reaction. Using a detection system linked to HRP or alkaline phosphatase the antigen visualization is performed via specific binding of the primary antibody. Secondary antibody is binding to the primary antibody, and the enzyme complex labels this complex. The enzymatic activation of the chromogen results in a visible reaction product at the antigen site. Each step is incubated for a precise time and temperature and requires interposed washing steps. The specimen may then be counterstained. Results are interpreted using a light microscope.

Materials provided

Primary antibody	CD20
Host	Mouse
Subclass	IgG
Clone	ISM003
Species Cross-reactivity	Human. Others-not known
Applications	Immunohistochemistry
Epitope Retrieval	Heat-induced epitope retrieval
Ready-to-use antibody	Prediluted antibody in antibody diluent buffer

Product label shows the specific lot number.

Prediluted antibody is ready-to-use and optimized for staining. No further dilution, reconstitution, mixing, or titration is needed.

Materials required but not provided

The following materials may be required for staining but are not provided with the primary antibody.
- Positive and negative controls
- Microscope slides (positively charged) and cover slips
- Water bath
- Humidified chamber
- Staining jars
- Stopwatch
- Xylene or xylene substitute
- Ethanol
- Deionized or distilled water
- Antigen retrieval reagent, e.g. Antigen Enhancer (HIER buffer), Cat. No. BUAN01-500
- Detection system, e.g. IHC Complete Detection system (Goat anti mouse/rabbit HRP, DAB staining), Cat. No. D001-15
- Wash buffer: e.g. IHC Wash Buffer, Cat. No. BUWA01-1000
- Tap water/bluing reagent (e.g. ammonia water)
- Light microscope

Storage and handling

Store at 2 - 8 °C.

When stored correctly antibody is stable to the expiration date indicated on the vial. Do not use after expiration date.
To ensure proper reagent delivery and stability of the antibody, replace the dispenser cap after every use and immediately place the bottle cool in an upright position.

Staining procedure

1. Cut 3-4 µm section of formalin-fixed paraffin-embedded tissue and place on positively charged slides.
2. Dry at 65°C for 2 hours.

3. Deparaffinize, rehydrate, and epitope retrieve. Upon completion, rinse with 3 changes of distilled or deionized water.
4. If using HRP detection system, place slides in peroxide block for 10 minutes; rinse. If using AP detection system, omit this step.
5. Apply the antibody and incubate for 60 minutes; rinse.
6. Apply the InSituVison™ Polymer Rabbit/Mouse Detection System for 30 minutes; rinse.
7. Apply ample amount of DAB or AEC chromogen and incubate; rinse.
8. Dehydrate and coverslip.

Interpretation of results

The immunostaining procedure causes a colored reaction product to precipitate at the antigen sites localized by the primary antibody.

Cellular localization: Cell membrane.

A qualified pathologist experienced in immunohistochemistry procedures must evaluate positive and negative tissue controls before interpreting patient specimens.
Positive staining intensity should be assessed within the context of any background staining of the negative reagent control.
Note: A negative result means that the antigen in question was not detected, but not that the antigen is not present in the cells/tissues tested. An antibody panel may be used to support the results in some circumstances. Additionally, the morphology of each tissue sample should be examined utilizing a hematoxylin and eosin stained section. A qualified pathologist must interpret the patient's morphologic findings and pertinent clinical data.

Warnings and precautions

1. Application only by qualified and trained personnel.
2. There are no estimated health risks, if the product is used as directed. MSDS is available on request.
3. Product contains sodium azide as preservative. Pure sodium azide is toxic. The concentration of sodium azide in this reagent is < 0.1 % and is not classified hazardous.
   See MSDS.
4. As with any product derived from biological sources, proper handling procedures should be used.
5. Do not use reagents after expiration date.
6. Take reasonable precautions when handling reagents. Use protective clothing and gloves.
7. All hazardous materials should be disposed according to guidelines for hazardous waste disposal. Materials of human or animal origin should be handled as biohazardous materials and disposed of with proper precautions.
8. Avoid microbial contamination of reagents as it may cause incorrect results.

Literature

[1] Lykken JM, Tedder TF. The Tumor Microenvironment Regulates CD19 and CD20 Immunotherapy for Lymphoma. Cancer J. 2015 Jul-Aug;21(4):351-6.

[2] Safdari Y, Ahmadzadeh V, Farajnia S. CD20-targeting in B-cell malignancies: novel prospects for antibodies and combination therapies. Invest New Drugs. 2016 Aug;34(4):497-512.

[3] Shanehbandi D, Majidi J, Kazemi T, et al. CD20-based Immunotherapy of B-cell Derived Hematologic Malignancies. Curr Cancer Drug Targets. 2017 Jan 9.

Date of publication or revision

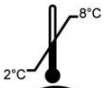
2024-06-10
Change(s) made: -

Explanation of symbols

Catalog number

Batch code


Use by



Temperature limitation


Do not use if package damaged


Consult instructions for use


Caution