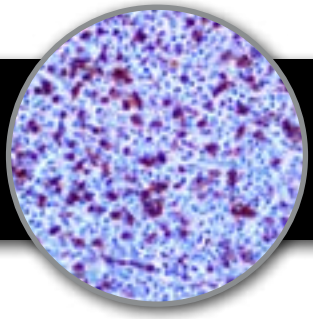
CD2

Clone: AB75

Mouse Monoclonal

CE IVD



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Inset: IHC of CD2 on a FFPE T-Cell Lymphoma Tissue

Intended Use

For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical applications on formalin-fixed paraffin-embedded tissues (FFPE), frozen tissue sections and cell preparations. Interpretation of results should be performed by a qualified medical professional.

Immunogen

Recombinant fragment encoding the external domain of the human CD2 molecule.

Summary and Explanation

CD2 is a cell-adhesion molecule found on the surface of T-cells and natural killer (NK) cells. It has also been called T-cell surface antigen T11/Leu-5, LFA-2, LFA-3 receptor, erythrocyte receptor and rosette receptor. Due to its structural characteristics, CD2 is a member of the immunoglobulin superfamily; it possesses two immunoglobulin-like domains in its extracellular portion. It interacts with other adhesion molecules, such as lymphocyte function-associated antigen-3 (LFA-3/CD58) in humans, or CD48 in rodents, which are expressed on the surfaces of other cells. In addition to its adhesive properties, CD2 also acts as a co-stimulatory molecule on T and NK cells.

CD2 is a surface antigen of the human T-lymphocyte lineage that is expressed on all peripheral blood T-cells. It is one of the earliest T-cell markers, being present on more than 95% of thymocytes; it is also found on some natural killer cells but not on B-lymphocytes. CD2 is implicated in the triggering of T-cells; the cytoplasmic domain is implicated in the signaling function. It is useful for the identification of Lymphomas and Leukemias of T-cell origin. As with other pan-T cell antigens, CD2 may be aberrantly deleted in some neoplastic T-cell populations, especially Peripheral T-cell Lymphomas.

Antibody Type	Mouse Monoclonal	**Clone**	AB75
Isotype	IgG1/K	**Reactivity**	Paraffin, Frozen
Localization	Membranous	**Control**	Tonsil, Lymph Node
Species Reactivity		Human	

Presentation

CD2 is a mouse monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

Presentations

Catalog Num.	Antibody Type	Dilution	Volume/Qty
BSB 6205	Tinto Prediluted	Ready-to-Use	3.0 mL
BSB 6206	Tinto Prediluted	Ready-to-Use	7.0 mL
BSB 6207	Tinto Prediluted	Ready-to-Use	15.0 mL
BSB 6208	Concentrated	1:25 - 1:100	0.1 mL
BSB 6209	Concentrated	1:25 - 1:100	0.5 mL
BSB 6210	Concentrated	1:25 - 1:100	1.0 mL
BSB 6211	Control Slides	Not Applicable	5 slides

Precautions

1. For professional users only. Ensure results are interpreted by a medical professional.
2. This product contains sodium azide (NaN3), a toxic chemical which may react with plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent sodium azide build-up.
3. Ensure proper handling procedures are used with reagent. Always wear proper laboratory equipment such as laboratory coat and gloves when handling reagents.
4. Unused solution should be disposed of according to local and federal regulations.
5. Do not ingest reagent. If reagent ingested, contact a poison control center immediately.
6. For complete recommendations for handling biological specimens please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (6).

Storage

Store at 2-8 °C. Do not use after expiration date listed on package label. Temperature fluctuations should be avoided. Store appropriately when not in use, and avoid prolonged exposure to room temperature conditions.

Specimen Preparation

Paraffin sections: The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation to ensure best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033) or ImmunoDNA Digestor (BSB 0108-0112). See reverse side for complete protocol. Tissue should remain hydrated via use of Bio SB Immuno/DNA Washer solutions (BSB 0029 & BSB 0042).
Frozen sections and cell preparations: The antibody can be used for labeling acetone-fixed frozen sections and acetone-fixed cell preparations.

Staining Procedure

1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positive charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).
2. Air dry for 2 hours at 58° C.
3. Deparaffinize, dehydrate and rehydrate tissues.
4. Subject tissues to heat epitope retrieval using a suitable retrieval solution such as ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023) or EDTA (BSB 0030-BSB 0033).
5. Any of three heating methods may be used:

a. TintoRetriever Pressure Cooker or Equivalent

Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA, and place in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 15 minutes. Open and immediately transfer slides to room temperature.

b. TintoRetriever PT Module or Water Bath Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA at 95°-99° C. Incubate for 30-60 minutes.

c. Conventional Steamer Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA in a Steamer, cover and steam for 30-60 minutes.

6. After heat treatment, transfer slides in ImmunoDNA Retriever with Citrate or EDTA to room temperature and let stand for 15-20 minutes.
7. For manual staining, perform antibody incubation at ambient temperature. For automated staining methods, perform antibody incubation according to instrument manufacturer's instructions.
8. Wash slides with IHC wash buffer or DI water.
9. Continue IHC staining protocol.

Recommended IHC Protocol

Step	ImmunoDetector AP/HRP	PolyDetector AP/HRP	PolyDetector Plus HRP
Peroxidase/AP Blocker	5 min.	5 min.	5 min
Primary Antibody	30-60 min.	30-60 min.	30-60 min.
1st Step Detection	10 min.	30-45 min.	15 min.
2nd Step Detection	10 min.	Not Applicable	15 min.
Substrate-Chromogen	5-10 min.	5-10 min.	5-10 min.
Counterstain	Varies	Varies	Varies

Performance Characteristics

Normal Tissues
Positive (+)
T Cells in the Germinal Center (Strong Staining Reaction)
T Cells in the T-Zone (Moderate to Strong Staining Reaction)
Abnormal Tissues
Positive (+)
Anaplastic Large Cell Lymphomas 24/58
Unspecified Peripheral T-Cell Lymphoma 92/136
Precursor T-Cell Lymphoma 7/8

Product Limitations

Due to inherent variability present in immunohistochemical procedures (including fixation time of tissues, dilution factor of antibody, retrieval method utilized and incubation time), optimal performance should be established through the use of positive and negative controls. Results should be interpreted by a medical professional.

References

1. Hyjek E, Chadburn A, Liu YF, Cesarman E, Knowles DM. BCL-6 protein is expressed in precursor T-cell lymphoblastic lymphoma and in prenatal and postnatal thymus.
Blood 2001;97:270-76.
2. Went P, Agostinelli C, Gallaminni A, Piccaluga PP, Ascani S, Sabattini E, et al. Marker expression in peripheral T-cell lymphoma: A proposed clinical-pathological
prognostic score. J Clin Oncol 2006;24:2472-79.
3. D'Amore SEG, Menin A, Bonoldi E, Bevilacqua P, Cazzavilan S, Donofrio V, et al. Anaplastic large cell lymphomas: A study of 75 pediatric patients. Pediatr Dev Pathol
2007;10:181-91.
4. Leong AS-Y, Cooper K and Leong FJW-M. CD2. Manual of diagnostic antibodies for immunohistology. London: Greenwich Medical Media; 2003. p. 61-62.
5. Moingeon P, Chang HC, Sayre PH, Clayton LK, Alcover A, Gardner P, et al. The structural biology of CD2. Immunol Rev 1989;111:111-44.
6. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012.

Symbol Key / Légende des symboles/Erläuterung der Symbole

EC REP EMERGO EUROPE Prinsessegracht 20 2514 AP The Hague The Netherlands	Storage Temperature Limites de température Zulässiger Temperaturbereich	Manufacturer Fabricant Hersteller	REF Catalog Number Référence du catalogue Bestellnummer
IVD In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum	Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	Expiration Date Utiliser jusque Verwendbar bis	LOT Lot Number Code du lot Chargenbezeichnung

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