

Anti-Human CD4 (EDU-2; Ms.IgG2a)

Technical Data Sheet

Specificity	CD4	Clone	EDU-2
Hybridoma	NS-1 x BALB/c		
Isotype	IgG _{2a}	Host	Mouse
Source and Purification	The antibody is purified from cellular supernatant or ascitic fluid via affinity chromatography (protein A/G); after fluorochrome conjugation, the antibody is purified by means of size exclusion chromatography.		
Storage Buffer	1 ml of PBS pH 7.4 containing 0.5% BSA and 0.1% NaN ₃ .		
Intended use	The antibody is intended for identification and in vitro enumeration of CD4 ⁺ cells, according to customer's protocol. Relevant protocols are available upon request, including troubleshooting.		
Main applications	clinical	Immunodeficiency disease study, in particular HIV correlated syndromes. Lymphoma subset and T-cell leukaemia characterization. For Research Use Only - Not for use in diagnostic procedures	

Stability and storage

- Store at 2-8 °C. **Do not freeze!**
- Do not expose the reagent to direct light during storage or incubation with cells. In these conditions the product is stable until the expiration date stated on the vial label. Do not use after the expiration date.
- Use a fresh micropipette tip to take the reagent from the vial to preserve its performance characteristics and to avoid contaminations, which can cause erroneous results. Do not use the reagent if it discolours, or if precipitate forms.
- It is recommended to centrifuge before use.
- The pellet formation after centrifugation is a normal event which does not modify the product performances.

Performance characteristics

Specificity

The CD4 antigen (55 kDa) is present on a sub-set of T-lymphocytes, defined as helper/inducer, including about 40% of normal peripheral blood total lymphocytes. This antigen is expressed also on 80% of normal thymocytes, while is expressed at lower levels on circulating monocytes. CD4 plays a role in the recognition of foreign antigens presented to T cells by MHC class II molecules. Furthermore, this antigen acts as a receptor for HIV-1 by binding the viral protein gp1.

Sensitivity

The antibody sensitivity is defined by the positive CD4 population resolution from the negative CD4 population, obtained by analysing several antibody concentrations on PBMCs from healthy donors.

Reproducibility and repeatability

The antibody has been analysed during the II Human Leukocyte Differentiation Workshop and it meets the Workshop defined specifications (Bernard AR, Boumsell L, Dausset J, et al. eds. Leucocyte Typing: Human Leucocyte Differentiation Antigens Detected by Monoclonal antibodies. Berlin: Springer-Verlag, 1984).

REF	Catalogue number	 Expiry date	 Manufacturer: AcZon Srl Via Lavino 265/D 40050 Monte San Pietro (BO) • Italia Tel: +39 051 00 18 977 info@aczonpharma.com • www.aczonpharma.com
LOT	Lot number	 Temperature range	
RUO	For research use only	 Consult instructions for use	

To determine the repeatability of staining with each reagent, samples were stained with different lots of reagents using several samples.

Limits

When analysing samples, it should be considered that the use of monoclonal antibodies in patient treatment can interfere with recognition of target antigens by this reagent.

Using pathological specimens (e.g., leukaemia or lymphomas), it is possible to obtain more information with combined reagents rather than single reagents. Since reagents can be used in different combinations, laboratories need to become familiar with the properties of each antibody in conjunction with other markers in normal and abnormal samples.

Instructions and precautions

The reagent **contains sodium azide**, a toxic and dangerous compound, and should be handled by trained staff only.
H302 – Harmful if swallowed.

EUH032 – Contact with acids liberates very toxic gas.

P102 – Keep out of reach of children.

P270 – Do not eat, drink or smoke when using this product.

P280 – Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P301+P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician...

The reagent, the biological specimens and materials coming in contact with them are considered biohazards and handled as if capable of transmitting infections. Dispose in accordance with federal, state and local regulations.

Available packages

Form	Quantity	Code	F/P ratio	Tested Application
Purified concentrated	100 µg/1mL	CD4--AMSI00H	n.d.	Flow cytometry
Biotin concentrated	100 µg/1mL	CD4--FMSI00H	4-8	-
FITC ready to use	100 tests/1mL	CD4--BMSI00H	3-9	Flow cytometry
R-PE ready to use	100 tests/1mL	CD4--CMSI00H	0.5-1.5	Flow cytometry
APC ready to use	100 tests/1mL	CD4--EMSI00H	0.5-1.5	Flow cytometry
PerCP ready to use	100 tests/1mL	CD4--GMSI00H	1-2	Flow cytometry
TDR5 ready to use	100 tests/1mL	CD4--DMSI00H	2-4	Flow cytometry
TDP55 ready to use	100 tests/1mL	CD4--HMSI00H	2-4	Flow cytometry
TDR7 ready to use	100 tests/1mL	CD4--IMSI00H	0.5-1.5	Flow cytometry
TDA7 ready to use	100 tests/1mL	CD4--JMSI00H	1-2	Flow cytometry

I. For ready to use formats, 10 µl are sufficient to label 0.1-1x10⁶ leukocytes (or PBMCs) in 100 µl.

II. See label for lot-specific concentration values.

- TDR5 is a R-PE-Cy5 substitute dye.
- TDP55 is a PerCP-Cy5.5 substitute dye.
- TDR7 is a R-PE-Cy7 substitute dye.
- TDA7 is an APC-Cy7 substitute dye.

Only for professional use • MSDS and protocols available on request

References

Mandel M., Achiron A, Tuller T, Barliya T, Rechavi G, Amariglio N, Loewenthal R and Lavie G. *Immunology*. 2009, 128(2):287-300.

Gaubin M, Autiero M, Houlgatte R, Basmaciogullari S, Auffray C, Piatier-Tonneau D, *Eur. J. Clin. Chem. Clin. Biochem.* 1996, 34(9):723-8

Mazerolles F, Auffray C, Fischer A, *Hum. Immunol.* 1991, 31(1):40-6

Sattentau QJ, Weiss RA, *Cell* 1988, 52(5):631-3