CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Basophils, Human, clone 2D7		
Catalog number	HM2279		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG1	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	2	1,3,4	1	3				1
Yes	●	●	●	●				●
No								
N.D.					●	●	●	

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IF; Cytospin preparations were fixed in methanol for 15 min, incubated in methanol containing 0.6% H_2O_2, for 30 min to block endogenous peroxidase, washed in dH_2O, incubated with goat serum (1/500 dilution) for 2 h to block nonspecific staining. Blocked slides were washed with TTBS, pH7.4. (Ref.1)
- FC: Antibody 2D7 stains the extracellular domain of basophils. As negative control CD203c negative cells (basophil depleted cell fractions) (Ref.3)
- W: A reduced sample treatment and SDS-Page was used. The band sizes are 72 en 76 kDa (Ref.1).
- IHC-P: Fresh surgical tissues were fixed in Carnoy's fluid for 24 h and transferred to absolute ethanol. Tissues were embedded in paraffin, and 4-µm sections were prepared. Tissue sections were dewaxed in xylene and rehydrated in graded ethanol solutions. Endogenous peroxidase was inhibited. (Ref.1)
- IHC-F: Sections were fixed in either 10% NBF or Carnoy's fluid for 15 minutes at RT. NBF-fixed tissue sections were digested with 0.1% protease in TTBS for 20 min at RT. Endogenous peroxidase activity was inhibited by methanol with 0.6% H_2O_2 for 30 min at RT. Blocked by incubation in horse serum at 1:20 dilution in TTBS for 1 hr at RT. 2D7 at a 1:300 dilution in TTBS overnight at 4° C or with a murine mAb of undetermined specificity (MOPC31-C) as a negative control. (Ref.2)
- Positive control: Chronic myeloid leukaemia (basophilia); Negative control: CD203c negative cells (basophil depleted cell fractions)

General Information

Description

The monoclonal antibody 2D7 is a specific marker for basophils detecting a basophil-specific protein of 7.2-7.5 kDa localized in secretory granules. Activated basophils have been shown to have a reduced staining with the 2D7 antibody consistent with localization of the antigen to secretory granules. Basophils are multifunctional haematopoietic cells that secrete a wide variety of proinflammatory agents upon activation such as histamine and cytokines. Moreover, basophils can induce IgE production by B cells. Under normal conditions basophils are primarily produced in the bone marrow, whereas mature basophils reside in the circulation and can enter tissues at sites of inflammation. Both basophils and mast cells have been implicated in the pathogenesis of allergic inflammation due to the abundant expression of high affinity receptors for IgE. The 2D7 antibody can be used as a sensitive and precise marker for human basophils and does not react with lymphocytes, monocytes, eosinophils, neutrophils or mast cells in immunohistochemistry. Moreover, the antibody is suitable for western blot analysis of the 2D7 antigen.

Immunogen

Lysate of purified basophils.

References

1. Kepley, C et al; Identification and partial characterization of a unique marker for human basophils. J Immunol 1995, *154*: 6548.
2. Irani, A et al; Immunohistochemical detection of human basophils in late-phase skin reactions. J Allergy Clin Immunol 1998, *101*: 354.
3. Agis, H et al; Enumeration and immunohistochemical characterisation of bone marrow basophils in myeloproliferative disorders using the basophil specific monoclonal antibody 2D7. J Clin Pathol 2006, *59*: 396
4. Plager, D et al; Identification of basophils by a mAb directed against pro-major basic protein 1. J Allergy Clin Immunol 2006, *117*: 626

Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Robbert Zwinkels	19/03/2018

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.