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# CD53 Monoclonal Mouse Antibody (63-5A3)

## Product Description

Recognizes a protein of 33-55 kDa, identified as CD53 (Workshop V; Code CD53.1). CD53 is expressed on monocytes, and macrophages, granulocytes, dendritic cells, osteoblasts and osteoclasts, NK cells, and on T- and B-cells from every stage of differentiation but is absent from platelets, erythrocytes, and non-haemopoietic cells. CD53 is a member of a family of tetraspan transmembrane proteins, including CD9, CD37, CD63, CD81, and CD82. It associates with integrins, MHC class II molecules, and a tyrosine phosphatase and plays a role in cellular activation as part of a signal transduction complex involving other membrane glycoproteins. Defects of CD53 expression on neutrophils appear to be related with recurrent infectious diseases. Cross-linking CD53 using CD53 antibodies led to cytoplasmic calcium fluxes in B cells, monocytes, and granulocytes and activation of the monocyte oxidative burst.

Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the [CF® Dye Brochure](#) for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors.

**Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email [order@biotium.com](mailto:order@biotium.com) to inquire about stock status and lead times before placing your order.

**Catalog number key for antibody number 0356, Anti-CD53 (63-5A3)**

## Product attributes

Antibody number	#0356
Antibody reactivity (target)	CD53
Antibody type	Primary
Host species	Mouse
Clonality	Monoclonal
Clone	63-5A3
Isotype	IgG2b, kappa
Molecular weight	33-55 kDa
Synonyms	CD53 glycoprotein; CD53 tetraspan antigen; Cell surface glycoprotein CD53; Leukocyte surface antigen CD53; Tetraspanin-25 (Tspan-25); TSPAN25
Human gene symbol	CD53
Entrez gene ID	963
SwissProt	P19397
Unigene	443057
Immunogen	Human Sezary cells
Antibody target cellular localization	Plasma membrane
Species reactivity	Human
Expected antibody applications	Flow (surface), Functional studies (published for clone), IP (published for clone)
Antibody application notes	Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody, Immunofluorescence: 0.5-1 ug/mL, Flow Cytometry 0.5-1 ug/million cells/0.1 mL, Optimal dilution for a specific application should be determined by user
Positive control	Daudi, Raji, IM9, U266, YT, HUT-78, HUT-102, Jurkat, HL-60, THP-1, KG1a, human leukocytes. Human tonsil and lymph node.
Shipping condition	Room temperature
Storage Conditions	Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended
Regulatory status	For research use only (RUO)
Antibody/conjugate formulation	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide
Antibody research areas	Immunology
Product origin	Product may contain either bovine serum albumin (BSA) from bovine serum (Bos taurus), or recombinant BSA produced in Chinese hamster ovary cells. Inquire for the specific lot.
Cell/tissue expression	Hematopoietic cells, Osteoblasts/osteoclasts

Antibody # prefix	Conjugation	Ex/Em (nm)	Laser line	Detection channel	Dye Features
BNC04	CF®405S	404/431	405	DAPI (microscopy), AF405	<a href="#">CF®405S Features</a>
BNC88	CF®488A	490/515	488	GFP, FITC	<a href="#">CF®488A Features</a>
BNC68	CF®568	562/583	532, 561	RFP, TRITC	<a href="#">CF®568 Features</a>
BNC94	CF®594	593/614	561	Texas Red®	<a href="#">CF®594 Features</a>
BNC40	CF®640R	642/662	633-640	Cy®5	<a href="#">CF®640R Features</a>
BNC47	CF®647	650/665	633-640	Cy®5	<a href="#">CF®647 Features</a>
BNC74	CF®740	742/767	633-685	775/50	<a href="#">CF®740 Features</a>
BNCB	Biotin	N/A	N/A	N/A	
BNUB	Purified	N/A	N/A	N/A	
BNUM	Purified, BSA-free	N/A	N/A	N/A	

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## References

Note: References for this clone sold by other suppliers may be listed for expected applications.

1. Eur J Biochem (2002) 269, 1012-1021. (functional studies)
2. J Immunol (1990) 145:4322-4325. (IP)
3. Knapp, W. et al., Leucocyte typing IV, p 534 and p 541. Oxford Univ. Press. 1989.
4. Schlossman SF et al. eds. Leukocyte Typing V, p556-559, Oxford University Press, Oxford, 1995.
5. Kishimoto T et al. eds. Leukocyte Typing VI, Garland Publishing, New York, 1997.

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