# 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 to inquire about stock status and lead times before placing your order. **Catalog number key for antibody number 0356, Anti-CD53 (63-5A3)**

## 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.

### Product attributes

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|---|---|
| **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 |
| **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 | CF®405S Features |
| BNC88 | CF®488A | 490/515 | 488 | GFP, FITC | CF®488A Features |
| BNC68 | CF®568 | 562/583 | 532, 561 | RFP, TRITC | CF®568 Features |
| BNC94 | CF®594 | 593/614 | 561 | Texas Red® | CF®594 Features |
| BNC40 | CF®640R | 642/662 | 633-640 | Cy®5 | CF®640R Features |
| BNC47 | CF®647 | 650/665 | 633-640 | Cy®5 | CF®647 Features |
| 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 | |