

**Mouse Anti-CD50 (ICAM-3) [186-2G9]: MC0684, MC0684RTU7**

**Intended Use:** For Research Use Only

**Description:** CD50 (ICAM-3) is a leukocyte-specific surface receptor involved in primary immune responses. It belongs to the immunoglobulin gene superfamily (Igsf). CD50 is constitutively expressed on human leukocytes, such as T and B lymphocytes, monocytes and neutrophils, and localizes to the rear of polarized leukocytes and clusters with the ezrin-radixin-moesin (ERM) proteins moesin and ezrin. These ERM proteins link CD50 to the actin cytoskeleton. It recognizes the Beta 2-integrin leukocyte function associated molecule-1 (LFA-1) as a receptor, moreover it also functions as a ligand for LFA-1, Mac-1 (CD11b/CD8),  $\alpha$ 2 integrins, and the Dendritic Cell-Specific ICAM-3-Grabbing Non Integrin (DC-SIGN) C-type lectin. CD50 mediates a plethora of immunologically relevant homotypic and heterotypic intercellular interactions, such as leukocyte recruitment during migration, removal of apoptotic cells and lymphocyte interactions with antigen-presenting cells. Importantly, CD50 is involved in the interactions that take place during the early stages of the immunological synapse establishment. Its engagement on the T cell surface increases the CD3- mediated up-regulation of CD25 and CD69 and initiates intracellular signaling including calcium transients and tyrosine phosphorylation. In addition to its role in leukocyte adhesion, CD50 also contributes to leukocyte migration by virtue of its relocalization to the trailing edge upon leukocyte polarization, an effect that takes place by its interaction with cytoskeletal components such as ERM proteins. CD50 antibodies ability to mediate biological effects is further illustrated by their capability to increase stimulation-dependent release of the pro-inflammatory cytokines interleukin-6 (IL-6) and IL-8 from HMC-1 cells.

**Specifications:**

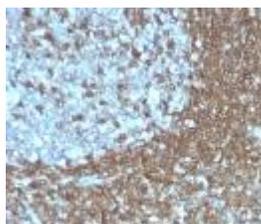
Clone: 186-2G9  
 Source: Mouse  
 Isotype: IgG2b/k  
 Reactivity: Human  
 Localization: Membrane  
 Formulation: Antibody in PBS pH7.4, containing BSA and  $\leq$  0.09% sodium azide (NaN<sub>3</sub>)  
 Storage: Store at 2°- 8°C  
 Applications: IHC, Flow Cyt., IF  
 Package:

Description	Catalog No.	Size
CD50 (ICAM-3) Concentrated	MC0684	1 ml
CD50 (ICAM-3) Prediluted	MC0684RTU7	7 ml

**IHC Procedure\*:**

Positive Control Tissue: Malignant stomach  
 Concentrated Dilution: 50-200  
 Pretreatment: Citrate pH6.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



FFPE human tonsil stained with anti-CD50 using DAB

**References:**

1. Exploiting human CD34+ stem cell-conditioned medium for tissue repair. Mintz PJ, et al. Mol Ther 22:149-59 (2014).
2. Coordinated RhoA signaling at the leading edge and uropod is required for T cell transendothelial migration. Heasman SJ, et al. J Cell Biol 190:553-63, 2010.

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Rev. A