Anti-Integrin-2/LFA-1?: Rabbit Integrin Beta-2/LFA-1 Beta Antibody

- Description
- Details
- Products
- Resources

Product Sheet CG1286

**Description**

**BACKGROUND** Lymphocyte function-associated antigen 1 (LFA-1, CD11a/CD18) is a cell adhesion molecule belonging to beta-2 integrin group with other two members Mac-1 (CD11b/CD18) and p150/CD18, which are homodimers with distinct alpha subunits of 150-180 kDa and same beta subunit of 95 kDa. It is expressed on T and B cells, granulocytes, and macrophages. LFA-1 adhesion is governed by its natural ligands including ICAM-1, 2, and 3, which are expressed on most leukocytes. It was also found that the IgSF member junctional adhesion molecule 1 (JAM-1) is also a LFA-1 ligand. LFA-1 participates in lymphocyte adhesion and activation, with prominent roles in the formation of the immunologic synapse and lymphocyte extravasation. Patients with leukocyte adhesion deficiency (LAD) disorder, a syndrome in which the LFA-1 integrin is mutated or missing, suffer severe recurrent bacterial infections and impaired overall immunity.

Stimulation of LFA-1 with antibodies or purified ICAMs induces augmentation of T-cell antigen receptor (TCR)-directed T-cell responsiveness. LFA-1 was shown to be linked to the tyrosine kinase signaling pathway that stimulates tyrosine phosphorylation and activation of phospholipase C-r1 (PLC-r1). Integrin beta-2 chain (CD18) crosslinking independently induced downstream mobilization of intracellular Ca\textsuperscript{2+} and potently costimulated TCR-induced Ca\textsuperscript{2+} flux with an increase in both amplitude and kinetics. Moreover, it was also demonstrated that LFA-1 induced the activation of src family kinases, Vav1 and p44/42 mitogen-activated protein kinase (MAPK), in human CD56+ NK cells. The LFA-1 signaling is directly linked to lymphocyte functional regulation. In addition, signaling through the LFA-1 integrin may affect c-Jun-driven transcription by regulating JAB1 nuclear localization. Disassociation of JAB-1 from LFA-1 is induced by phosphorylation at Ser745 on LFA-1 and mediates LFA-1-dependent c-Jun activation and subsequent AP-1 activity. After cell stimulation by phorbol ester or by CD3 ligation, the amino acids Thr758-Thr760 and Ser745 of LFA-1 become phosphorylated by PKC.

**REFERENCES**


Products are for research use only. They are not intended for human, animal, or diagnostic applications.

(Click to Enlarge) Top: Lanes: 1.) Marker [kDa] 230, 130, 95, 72, 56, 36, 28, 17, 11 2.) Human cell line RT-4 3.) Human cell line U-251MG sp 4.) Human plasma (IgG/HSA depleted) 5.) Human liver tissue 6.) Human tonsil tissue. Bottom: Immunohistochemical staining of human spleen shows strong cytoplasmic positivity in cells in red pulp.

Details

Cat.No.: CG1286
Antigen: Integrin beta-2 precursor recombinant protein epitope signature tag (PrEST).

Isotype: Rabbit IgG

Species & predicted species cross-reactivity ( ): Human

Applications & Suggested starting dilutions:* 

<table>
<thead>
<tr>
<th>Method</th>
<th>Dilution</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>1:100-1:250</td>
</tr>
<tr>
<td>IP</td>
<td>n/d</td>
</tr>
<tr>
<td>IHC</td>
<td>1:200-1:500</td>
</tr>
<tr>
<td>ICC</td>
<td>n/d</td>
</tr>
<tr>
<td>FACS</td>
<td>n/d</td>
</tr>
</tbody>
</table>

Predicted Molecular Weight of protein: 29 kDa

Specificity/Sensitivity: Detects endogenous Integrin-β2/LFA-1? proteins without cross-reactivity with other family members.

Storage: Store at -20°C, 4°C for frequent use. Avoid repeated freeze-thaw cycles.

*Optimal working dilutions must be determined by end user.

Products

Resources/Documents

Product Sheet CG1286 [2]

Misc. Links

- Site
- Privacy
- Returns
- Shipping
- Terms
- Disclaimer
- Distributors

Contact Us

Cell Applications, Inc
6455 Weathers Place
San Diego, CA 92121