**DESCRIPTION**

**Species Reactivity**
Human

**Specificity**
Detects human BAFF/BLyS/TNFSF13B in direct ELISAs and Western blots. In Western blots, approximately 5% cross-reactivity with recombinant human (rh) TL1A/TNFSF15 is observed and no cross-reactivity with rhAPRIL, rhTNF-α, rhFas Ligand, rhGITR Ligand, rhLIGHT, rhTRAIL, rhTRANCE, or rhTWEAK is observed.

**Source**
Monoclonal Mouse IgG1, Clone # 137314

**Purification**
Protein A or G purified from hybridoma culture supernatant

**Immunogen**
E. coli-derived recombinant human BAFF/BLyS/TNFSF13B

**Formulation**
Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Western Blot</th>
<th>Recombinant Human BAFF/BLyS/TNFSF13B (Catalog # 2149-BF)</th>
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</thead>
<tbody>
<tr>
<td>Concentration</td>
<td>1 μg/mL</td>
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<tr>
<td>Sample</td>
<td>Human peripheral blood mononuclear cells treated with PMA and Ca²⁺ ionomycin, fixed with paraformaldehyde, and permeabilized with saponin</td>
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</tbody>
</table>

**CyTOF-ready**
Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.

**PREPARATION AND STORAGE**

**Reconstitution**
Reconstitute at 0.5 mg/mL in sterile PBS.

**Shipping**
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

**Stability & Storage**
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

BAFF (also known as TALL-1, BLyS, and THANK) is a type II transmembrane glycoprotein belonging to the TNF superfamily and has been designated as TNF superfamily member 13B (TNFSF13B). Human BAFF is a 285 amino acid (aa) protein consisting of a 218 aa extracellular domain, a 21 aa transmembrane region and a 46 aa cytoplasmic tail (1, 2). BAFF has the typical structural characteristics of the TNF superfamily ligands. It is a homotrimeric protein having the structurally conserved motif known as TNF homology domain (3, 4). A higher ordered structure composed of a cluster of trimeric units resembling the structure of a viral capsid has also been reported (4). Human BAFF may be shed from the cell surface by proteolytic cleavage between R133 and Ala134 to yield a soluble form of the TNF homology domain (3, 4). A higher ordered structure composed of a cluster of trimeric units resembling the structure of a viral capsid which is the principal BAFF receptor (BR3 or TNFSF13C), also known as TALL-1, BLyS, and THANK (1, 5). Within the TNF superfamily BAFF shares the highest homology (48%) with APRIL (1). BAFF shares with APRIL the ability to bind to BCMA and TACI and also binds specifically to BAFF receptor (BAFF R, also known as BR3 or TNFSF13C), which is the principal BAFF receptor (6 - 8). All three receptors are type III transmembrane proteins that are expressed in B cells. BAFF and APRIL can form active heteromers that bind to TACI (9). BAFF is expressed in peripheral blood mononuclear cells, in spleen and lymph nodes. Its expression in resting monocytes is up-regulated by IFN-α, IFN-β, LPS and IL-10. BAFF provides critical survival signals to a subset of B cells with intermediate maturation status (T2 B cells) during the immune response (10). BAFF also plays an important role in the development of lymphoid tissue and enhances the survival of activated memory B cells (7, 11). Human and mouse BAFF share 86% aa sequence identity (1).

**References:**