

## Contents

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<b>Products</b>	Human BAFF, research grade. Recombinant human B cell activating factor belonging to the TNF family.								
	<table> <tr> <th>Content in µg</th><th>Order no.</th></tr> <tr> <td>5</td><td>130-093-806</td></tr> <tr> <td>20</td><td>130-093-807</td></tr> <tr> <td>100</td><td>130-108-987</td></tr> </table>	Content in µg	Order no.	5	130-093-806	20	130-093-807	100	130-108-987
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5	130-093-806								
20	130-093-807								
100	130-108-987								
<b>Biological activity</b>	The ED <sub>50</sub> is ≤2000 ng/mL corresponding to an activity of ≥0.5×10 <sup>3</sup> U/mg. ▲ <b>Note:</b> The ED <sub>50</sub> is determined by mouse splenocyte survival assay.								
<b>Primary structure</b>	Single, non-glycosylated polypeptide chain without N-terminal methionine (152 amino acid residues).								
<b>Molecular mass</b>	17 kDa.								
<b>Source</b>	Produced in <i>E. coli</i> .								
<b>Product format</b>	Lyophilized from a filtered (0.2 µm) buffer solution.								
<b>Stabilizer</b>	None.								
<b>Purity</b>	>95% as determined by SDS-PAGE analysis.								
<b>Endotoxin level</b>	Low endotoxin (<1.0 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.								
<b>Storage</b>	Lyophilized Human BAFF, research grade should be stored at -20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at -20 °C or below. Avoid repeated freeze-thaw cycles.								
<b>Reconstitution</b>	It is recommended to reconstitute lyophilized Human BAFF, research grade with deionized sterile-filtered water to a final concentration of 0.1–1.0 mg/mL in a minimal volume of 50 µL. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.								

#### 1.1 Background information

B cell activating factor (BAFF) is a ligand belonging to the TNF superfamily and plays an important role in regulation of lymphocytes, especially peripheral B cells. It is expressed in T

cells, dendritic cells, macrophages, and monocytes and binds three receptors, TACI, BCMA, and the BAFF specific receptor (BAFF-R), which is essential for the B cell promoting activity. BAFF induces stimulation of B and T cell function, and promotes maturation and survival of B cell lineage cells and peripheral B cells. High expression of BAFF increases Th1 response, and correlates with B cell malignancies and autoimmunity, such as systemic lupus erythematosus and rheumatoid arthritis, allograft reactions, and celiac disease. On the contrary, inefficient production of BAFF can lead to an impair of B cell activation and immunodeficiency. Recombinant human BAFF contains the TNF-like portion of the extracellular domain, which shares 72% amino acid sequence identity with mouse BAFF.

#### 1.2 Applications

Human BAFF can be used for a variety of applications, including:

- Study of B cell differentiation and activation.
- Investigation of TNF-receptor superfamily signaling.

Optimal concentration for a specific application should be determined by a dose-response experiment.

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