

## BPI Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P7644
<b>Synonyms:</b>	rHuBactericidal Permeability-Increasing Protein, His; Bactericidal permeability-increasing protein; BPI; CAP57
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	AAH40955.1 (V32-K487)
<b>Gene ID:</b>	671
<b>Molecular Weight:</b>	50-60 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>V N P G V V V R I S    Q K G L D Y A S Q Q    G T A A L Q K E L K    R I K I P D Y S D S</p> <p>F K I K H L G K G H    Y S F Y S M D I R E    F Q L P S S Q I S M    V P N V G L K F S I</p> <p>S N A N I K I S G K    W K A Q K R F L K M    S G N F D L S I E G    M S I S A D L K L G</p> <p>S N P T S G K P T I    T C S S C S S H I N    S V H V H I S K S K    V G W L I Q L F H K</p> <p>K I E S A L R N K M    N S Q V C E K V T N    S V S S K L Q P Y F    Q T L P V M T K I D</p> <p>S V A G I N Y G L V    A P P A T T A E T L    D V Q M K G E F Y S    E N H H N P P P F A</p> <p>P P V M E F P A A H    D R M V Y L G L S D    Y F F N T A G L V Y    Q E A G V L K M T L</p> <p>R D D M I P K E S K    F R L T T K F F G T    F L P E V A K K F P    N M K I Q I H V S A</p> <p>S T P P H L S V Q P    T G L T F Y P A V D    V Q A F A V L P N S    S L A S L F L I G M</p> <p>H T T G S M E V S A    E S N R L V G E L K    L D R L L L E L K H    S N I G P F P V E L</p> <p>L Q D I M N Y I V P    I L V L P R V N E K    L Q K G F P L P T P    A R V Q L Y N V V L</p> <p>Q P H Q N F L L F G    A D V V Y K H H H H    H H</p>
<b>Biological Activity</b>	Measured by its ability to inhibit LPS-induced IL-8 secretion by THP-1 human acute monocytic leukemia cell. The ED <sub>50</sub> for this effect is 3.082 ng/mL in the present of 2 µg/mL LPS, corresponding to a specific activity is 3.245×10 <sup>5</sup> U/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized after extensive dialysis against 20 mM PB, 150 mM NaCl, pH7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

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## DESCRIPTION

### Background

BPI consists of two functionally distinct domains: a potently antibacterial and anti-endotoxin amino-terminal domain (~20 kDa) and a carboxy-terminal portion that imparts opsonic activity to BPI<sup>[1]</sup>.

Bactericidal/permeability-increasing protein has endotoxin-neutralizing activity<sup>[2]</sup>.

BPI exhibits strong anti-microbial activity against GNB and potent endotoxin-neutralizing activity<sup>[3]</sup>.

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## REFERENCES

[1]. P Elsbach, et al. Role of the bactericidal/permeability-increasing protein in host defence. *Curr Opin Immunol*. 1998 Feb;10(1):45-9.

[2]. M N Marra, et al. Bactericidal/permeability-increasing protein has endotoxin-neutralizing activity. *J Immunol*. 1990 Jan 15;144(2):662-6.

[3]. Hendrik Schultz, et al. The bactericidal/permeability-increasing protein (BPI) in infection and inflammatory disease. *Clin Chim Acta*. 2007 Sep;384(1-2):12-23.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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