

## 32-3946: HP-NAP Recombinant Protein

**Alternative Name :** DNA protection during starvation protein, Bacterioferritin, HP-NAP, Neutrophil-activating protein A, NAP A, dps, napA.

### Description

Source : Escherichia Coli. HP-NAP Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain (Met1-Ala144) containing 154 amino acids including a 10 aa His tag at N-terminus. The total calculated molecular mass is 18.2kDa. HP-NAP protects DNA from oxidative damage by sequestering intracellular Fe<sup>2+</sup> ion and storing it in the form of Fe<sup>3+</sup> oxyhydroxide mineral. One hydrogen peroxide oxidizes two Fe<sup>2+</sup> ions, thus preventing hydroxyl radical production by the Fenton reaction. HP-NAP is necessary for the survival in the presence of oxidative stress. Dps is also a virulence factor which activates neutrophils, mast cells and monocytes. HP-NAP binds to neutrophil-glycosphingolipids and to sulfated carbohydrates on mucin. HP-NAP might play a part in the accumulation of neutrophils and monocytes at the site of infection. HP-NAP induces superoxide anion generation, adhesion and chemotaxis of neutrophils, via a pertussis toxin-sensitive pathway involving MAP kinases.

### Product Info

**Amount :** 10 µg  
**Purification :** Greater than 95.0% as determined by SDS-PAGE.  
**Content :** HP-NAP was filtered (0.4µm) and lyophilized in 20mM Tris buffer and 50mM NaCl, pH 7.5.  
**Storage condition :** Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.  
**Amino Acid :** MKHHHHHHASMKTFEILKHL QADAIVLFMK VHNFWNVKG TDFFNVHKAT EEIYEEFADM  
FDDLAERIVQ LGHHPLVTL S EAIKLRVKE ETKTSFHSKD IFKEILEDYK YLEKEFKELS  
NTAEKEGDKV TVTYADDQLA KLQKSIWMLQ AHLA.

### Application Note

It is recommended to add 200µl of deionized water to prepare a working stock solution of approximately 0.5mg/ml and let the lyophilized pellet dissolve completely. HP-NAP is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

