

## FPG Protein, E.coli (His)

Cat. No.:	HY-P78943
Synonyms:	
Species:	E.coli
Source:	E. coli
Accession:	P05523
Gene ID:	946765
Molecular Weight:	Approximately 30.3 kDa

### PROPERTIES

AA Sequence	<pre> M P E L P E V E T S   R R G I E P H L V G   A T I L H A V V R N   G R L R W P V S E E I Y R L S D Q P V L   S V Q R R A K Y L L   L E L P E G W I I I   H L G M S G S L R I L P E E L P P E K H   D H V D L V M S N G   K V L R Y T D P R R   F G A W L W T K E L E G H N V L T H L G   P E P L S D D F N G   E Y L H Q K C A K K   K T A I K P W L M D N K L V V G V G N I   Y A S E S L F A A G   I H P D R L A S S L   S L A E C E L L A R V I K A V L L R S I   E Q G G T T L K D F   L Q S D G K P G Y F   A Q E L Q V Y G R K G E P C R V C G T P   I V A T K H A Q R A   T F Y C R Q C Q K           </pre>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

Background	<p>FPG, an essential player in base excision repair, addresses DNA damage resulting from oxidation or exposure to mutagenic agents. Functioning as a DNA glycosylase, FPG recognizes and eliminates damaged bases, exhibiting a preference for oxidized purines like 7,8-dihydro-8-oxoguanine (8-oxoG) and its derivatives, including guanidinohydantoin:C and spiroiminodihydantoin:C. Additionally, FPG acts on thymine glycol:G, 5,6-dihydrouracil:G, and 5-hydroxyuracil:G. Notably, FPG possesses AP (apurinic/apyrimidinic) lyase activity, introducing nicks in the DNA strand. Through beta-delta elimination, it cleaves the DNA backbone, generating a single-strand break at the site of the removed base, encompassing both 3'- and 5'-phosphates. Moreover, FPG efficiently cleaves single-stranded DNA containing an AP site, contributing to the repair of DNA lesions.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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