

## Product datasheet for PH301785

### FEN1 (NM\_004111) Human Mass Spec Standard

#### Product data:

|                                       |   |
|---------------------------------------|---|
| Product Type:                         | Mass Spec Standards   |
| Description:                          | FEN1 MS Standard C13 and N15-labeled recombinant protein (NP_004102)  |
| Species:                              | Human   |
| Expression Host:                      | HEK293  |
| Expression cDNA Clone or AA Sequence: | RC201785  |
| Predicted MW:                         | 42.6 kDa  |
| Protein Sequence:                     | >RC201785 protein sequence<br>Red=Cloning site Green=Tags(s)<br><br>MGIQGLAKLIADVAPSAIRENDIKSYFGRKVAIDASMSIYQFLI AVRQGGDVLQNEEGETTSHLMGMFYR<br>TIRMMENGIKPVYVFDGKPPQLKSGELAKRSERRAEAEKQLQQAQAAGAEQEVEKFTKRLVKVTKQHND<br>CKHLLSLMGIPYLDAPSEAEASCAALVKAGKVYAAATEDMDCLTFGSPVLMRHLTASEAKKLP IQEFHLS<br>RILQELGLNQEQFVLDLCILLGSDYCESIRGIGPKRAVDL IQKHKSIEEIVRRDPNKYPVPENWLHKEAH<br>QLFLEPEVLDPEVELKWSEPNEEELIKFMCGEKQFSEERIRSGVKRLSKSRQGSTQGRLDDFFKVTGSL<br>SSAKRKEPEPKGSTKKKAKTGAAGKFKRGK<br><br>TRTRPLEQKLI SEEDLAANDILDYKDDDDKV |
| Tag:                                  | C-Myc/DDK   |
| Purity:                               | > 80% as determined by SDS-PAGE and Coomassie blue staining   |
| Concentration:                        | >0.05 µg/µL as determined by microplate BCA method  |
| Labeling Method:                      | Labeled with [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>4</sub> ]-L-Arginine and [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>2</sub> ]-L-Lysine  |
| Buffer:                               | 25 mM Tris-HCl, 100 mM glycine, pH 7.3  |
| Storage:                              | Store at -80°C. Avoid repeated freeze-thaw cycles.  |
| Stability:                            | Stable for 3 months from receipt of products under proper storage and handling conditions.  |
| RefSeq:                               | <u>NP_004102</u>  |
| RefSeq Size:                          | 2308  |
| RefSeq ORF:                           | 1140  |
| Synonyms:                             | FEN-1; MF1; RAD2  |
| Locus ID:                             | 2237  |



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UniProt ID: [P39748](#), [Q6FHX6](#)

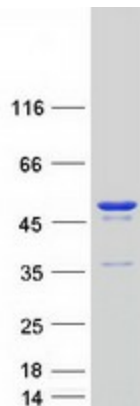
Cytogenetics: 11q12.2

**Summary:** The protein encoded by this gene removes 5' overhanging flaps in DNA repair and processes the 5' ends of Okazaki fragments in lagging strand DNA synthesis. Direct physical interaction between this protein and AP endonuclease 1 during long-patch base excision repair provides coordinated loading of the proteins onto the substrate, thus passing the substrate from one enzyme to another. The protein is a member of the XPG/RAD2 endonuclease family and is one of ten proteins essential for cell-free DNA replication. DNA secondary structure can inhibit flap processing at certain trinucleotide repeats in a length-dependent manner by concealing the 5' end of the flap that is necessary for both binding and cleavage by the protein encoded by this gene. Therefore, secondary structure can deter the protective function of this protein, leading to site-specific trinucleotide expansions. [provided by RefSeq, Jul 2008]

**Protein Families:** Druggable Genome, Stem cell - Pluripotency

**Protein Pathways:** Base excision repair, DNA replication, Non-homologous end-joining

### Product images:



Coomassie blue staining of purified FEN1 protein (Cat# [TP301785]). The protein was produced from HEK293T cells transfected with FEN1 cDNA clone (Cat# [RC201785]) using MegaTran 2.0 (Cat# [TT210002]).