# Recombinant PSMF1 protein (His tag)

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| **Catalog Number** | 540899 |
| **Synonyms** | hPI31 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q92530 |
| **Molecular Weight** | Predictes a molecular mass of 18.20 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 19 kDa band. |

## Product Information

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| **Sequence Region** | 2-148 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >90%, by SDS-PAGE with Coomassie Brilliant Blue staining. |
| **Endotoxin** | Not tested. |
| **Activity** | Not tested. |
| **Stability** | Samples are stable for up to twelve months from date of receipt at -70℃ |
| **Protein Construction** | DNA encoding 2-148 aa (Q92530) were fused with 6His tag. |

## Storage & Handling

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| **Reconstitution** | Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. |
| **Storage** | Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| **Shipping** | In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Introducing the recombinant human Proteasome inhibitor PI31 subunit (hPI31) fragment (residues 2-148), a highly stable and soluble protein unit designed for advanced structural and biochemical studies. This fragment captures essential functional characteristics of hPI31, enabling researchers to investigate its role in proteasome regulation with precision and reliability.<br>The full-length Proteasome inhibitor PI31 subunit (hPI31), encoded by the PSMF1 gene in Homo sapiens, plays a critical role in controlling proteasome function. It inhibits the hydrolysis of protein and peptide substrates by the 20S proteasome and also blocks proteasome activation by regulatory proteins PA700 and PA28, thereby modulating intracellular protein degradation pathways. Located in both the cytoplasm and endoplasmic reticulum, hPI31 is involved in key cellular processes where precise regulation of proteasomal activity is essential, such as protein quality control and stress response mechanisms. |