# Recombinant BBOF1 protein (His tag)

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| **Catalog Number** | 549298 |
| **Synonyms** | Coiled-coil domain-containing protein 176 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q8ND07 |
| **Molecular Weight** | Predictes a molecular mass of 52.45 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 58 kDa band. |

## Product Information

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| **Sequence Region** | 33-459 |
| **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 33-459 aa (Q8ND07) 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** | Recombinant Human Basal Body-Orientation Factor 1 (BBOF1) Fragment (aa 33-459) - A highly stable and soluble protein fragment ideal for structural studies and functional investigations of sperm flagellar stability and male fertility mechanisms.<br>Basal Body-Orientation Factor 1 (also known as Coiled-coil domain-containing protein 176) plays an essential role in sperm motility and male fertility by stabilizing the sperm flagellar axonemal structure. The protein may be required for maintaining the stability of ODF2 and MANS1 proteins, though it appears dispensable for the assembly and function of motile cilia. Subcellular localization studies show that BBOF1 is found in the cytoplasm associated with the cytoskeleton, specifically localizing to the cilium basal body and flagellum axoneme. The protein has been observed to localize to a polar structure adjacent to the basal body, indicating its specialized role in basal body organization and flagellar function. |