Recombinant SLF1 protein (His tag)

Catalog Number	548101
Synonyms	Ankyrin repeat domain-containing protein 32; BRCT domain-containing protein 1; Smc5/6 localization factor 1
Species	Human
Expression System	E. coli
Accession	Q9BQI6
Molecular Weight	Predictes a molecular mass of 24.70 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	1-200
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-200 aa (Q9BQI6) were fused with 6His tag.

Storage & Handling

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. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Introducing the recombinant fragment of SMC5-SMC6 complex localization factor protein 1 (SLF1), encompassing amino acids 1-200. This fragment includes the critical BRCT 1 and BRCT 2 domains, making it an ideal tool for investigating DNA damage response mechanisms, particularly in studies focused on domain-specific interactions and functions. The full-length SLF1 protein, also known as Ankyrin repeat domain-containing protein 32 or BRCT domain-containing protein 1, plays a pivotal role in the DNA damage response (DDR) pathway. It regulates postreplication repair of UV-damaged DNA and maintains genomic stability. The SLF1-SLF2 complex links RAD18 with the SMC5-SMC6 complex at sites of replication-coupled interstrand cross-links (ICL) and DNA double-strand breaks (DSBs) during DNA repair, particularly in response to stalled replication forks. SLF1 promotes the recruitment of SLF2 and the SMC5-SMC6 complex to DNA lesions. Subcellularly, SLF1 is located in the nucleus and cytoplasm, including the centrosome, and relocalizes with RAD18 to nuclear foci upon DNA damage. It associates with chromatin and accumulates with RAD18 and the SMC5-SMC6 complex at DNA damage sites in a ubiquitin-dependent manner, highlighting its essential role in maintaining DNA integrity.