# Recombinant Human Dedicator of cytokinesis protein 8 (DOCK8), partial

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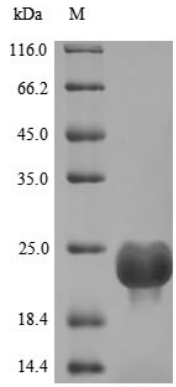
| **Product Code** | CSB-YP836734HUb0 |
| **Relevance** | Potential guanine nucleotide exchange factor (GEF). GEF proteins activate some small GTPases by exchanging bound GDP for free GTP. Is involved in NK cell cytotoxicity by controlling polarization of microtubule-organizing center (MTOC), and possibly regulating CCDC88B-mediated lytic granule transport to MTOC during cell killing |
| **Abbreviation** | Recombinant Human DOCK8 protein, partial |
| **Storage** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |
| **Uniprot No.** | Q8NF50 |
| **Product Type** | Recombinant Protein |
| **Immunogen Species** | Homo sapiens (Human) |
| **Purity** | Greater than 85% as determined by SDS-PAGE. |
| **Sequence** | RNLLYVYPQRLNFVNKLASARNITIKIQFMCGEDASNAMPVIFGKSSGPEFLQEVYTAVTYHNKSPDFYEEVKIKLPAKLTVNHHLLFTFYHISCQQKQGASVETLLGYSWLPILLNERLQTGSYCLPVALEKLPPNYSMHSAEKVPLQNPPIKWAEGHKGVFNIEVQAV |
| **Research Area** | others |
| **Source** | Yeast |
| **Target Names** | DOCK8 |
| **Expression Region** | 560-729aa |
| **Notes** | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week. |
| **Tag Info** | N-terminal 10xHis-tagged |
| **Mol. Weight** | 21.8kDa |
| **Protein Length** | Partial |
| **Image** | |




(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

## Description

Recombinant Human Dedicator of cytokinesis protein 8 (DOCK8) is produced using a yeast expression system and covers amino acids 560 to 729. This partial protein carries an N-terminal 10xHis tag that helps with purification and detection. The product shows purity levels above 85%, confirmed through SDS-PAGE analysis. This protein is meant for research use only and should not be used for diagnostic or therapeutic purposes.

The Dedicator of cytokinesis protein 8 (DOCK8) appears to be involved in cellular processes that reorganize the cytoskeleton. It likely plays a critical role in immune system function, particularly within signaling pathways that control cell migration and survival. Given its apparent importance in immune cell dynamics, DOCK8 has become a significant focus for studies examining immunodeficiencies and related immune conditions.

### Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

### 1. Protein-Protein Interaction Studies

This recombinant DOCK8 fragment (560-729aa) works well in pull-down assays for identifying and characterizing binding partners within this specific domain region. The N-terminal 10xHis tag allows immobilization on nickel-affinity resins, which can then capture interacting proteins from cell lysates or purified protein libraries. These studies might help map the interaction network of this DOCK8 domain and may reveal binding specificities. While the yeast expression system provides proper eukaryotic folding, it also maintains cost-effectiveness for interaction screening experiments.

### 2. Antibody Development and Validation

The purified DOCK8 fragment can work as an immunogen or screening antigen when developing domain-specific antibodies against the 560-729aa region. High purity (>85%) and the His-tag help with both immunization protocols and later

antibody validation through ELISA or Western blot analyses. Researchers might use this fragment to generate antibodies that specifically recognize this DOCK8 domain without cross-reacting to other regions of the full-length protein. The defined amino acid boundaries should allow for precise epitope mapping studies.

**3. Structural and Biophysical Characterization**

This DOCK8 domain fragment offers suitable material for structural biology approaches, including X-ray crystallography, NMR spectroscopy, or cryo-electron microscopy studies. The purified protein works in biophysical analyses such as dynamic light scattering, circular dichroism spectroscopy, or thermal stability assays to characterize folding properties and stability of this specific domain. The His-tag helps with purification optimization for structural studies. Meanwhile, the yeast expression system may provide appropriate post-translational modifications for native-like folding.

**4. Biochemical Assay Development**

The recombinant DOCK8 fragment can serve as a reference standard or positive control in biochemical assays designed to study DOCK8 function or regulation. Researchers can develop binding assays, enzymatic activity measurements, or inhibitor screening platforms using this purified domain as a substrate or target protein. The consistent quality and purity should enable reproducible assay conditions across different experimental batches. The His-tag allows for straightforward immobilization in plate-based assay formats or biosensor applications.

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| **Reconstitution** | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference. |
| **Shelf Life** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.<br>Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |