# Recombinant Mouse Ig kappa chain V-V region K2

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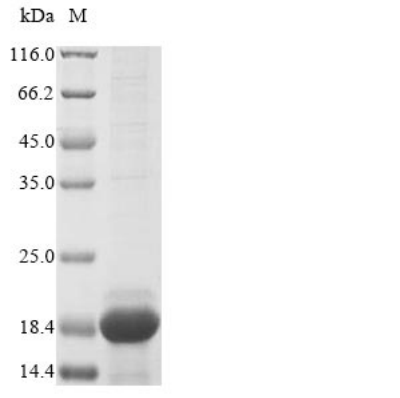
| **Product Code** | CSB-EP365608MO |
| **Abbreviation** | Recombinant Mouse Ig kappa chain V-V region K2 protein |
| **Storage** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid 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.** | P01635 |
| **Product Type** | Recombinant Protein |
| **Immunogen Species** | Mus musculus (Mouse) |
| **Purity** | Greater than 85% as determined by SDS-PAGE. |
| **Sequence** | DIQMTQSPASLSASVGETVTITCRASGNIHNYLAWYQQKQGKSPQLLVYNAKT LADGVPSRFSGSGSGTQYSLKINSLQPEDFGSYYCQHFWSTP |
| **Research Area** | Others |
| **Source** | E.coli |
| **Protein Names** | Recommended name: Ig kappa chain V-V region K2 |
| **Expression Region** | 21-115aa |
| **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 and C-terminal Myc-tagged |
| **Mol. Weight** | 17.4 kDa |
| **Protein Length** | Full Length of Mature Protein |

**Image**




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

**Description**

Recombinant Mouse Ig kappa chain V-V region K2 is produced in E. coli, expressing the full length of the mature protein from amino acids 21 to 115. The protein comes with an N-terminal 10xHis-tag and a C-terminal Myc-tag, which appears to make it quite versatile for research work. SDS-PAGE analysis shows

purity levels above 85%, suggesting it should work well for most experimental applications that need reliable recombinant protein standards.

The Ig kappa chain V-V region K2 belongs to the immunoglobulin light chain kappa family. These proteins seem to play a crucial role in adaptive immune responses - they're involved in recognizing antigens and form part of the antigen-binding sites on antibodies. Understanding how this protein works may be essential for anyone studying immune system mechanisms or developing therapeutic antibodies.

**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. Immunoglobulin Variable Region Structure-Function Studies**

This recombinant mouse protein could serve as a useful model for investigating how immunoglobulin variable domains fold and maintain their structure. The dual tags make purification straightforward and detection easier in biochemical assays that examine protein stability, thermal denaturation, and conformational changes. Scientists can study the basic properties of antibody variable regions without dealing with the added complexity of full-length immunoglobulin molecules. Using E. coli as the expression system appears to offer a cost-effective way to produce enough protein for biophysical studies.

**2. Antibody Engineering and Development Research**

This protein might work well as a reference standard or control when engineering antibodies, particularly for variable region optimization projects. Labs developing new antibody fragments or studying how variable domains interact could find this well-characterized construct helpful for comparative analysis. The His and Myc tags make purification and detection more manageable across different experimental setups - this seems especially valuable for screening assays and binding studies. It's likely to be particularly useful for researchers working on single-chain variable fragments (scFv) or similar antibody-derived constructs.

**3. Protein-Protein Interaction Studies**

The dual-tag design makes this recombinant protein an attractive option for pull-down assays and co-immunoprecipitation experiments aimed at finding potential binding partners of immunoglobulin variable regions. The N-terminal His tag allows for immobilization on metal affinity matrices, while the C-terminal Myc tag provides a way to detect and validate interactions. This setup could help researchers investigate how variable regions interact with other cellular components or synthetic molecules in controlled lab conditions.

### 4. Tag-Based Assay Development and Validation

This protein works well as a positive control for developing and validating detection systems based on His-tags and Myc-tags. Its known molecular weight and dual-tag setup make it suitable for optimizing ELISA protocols, Western blot conditions, and other immunodetection methods. Labs can use it to establish standard curves, check antibody specificity, and troubleshoot tag-based purification and detection protocols - though results may vary depending on specific experimental conditions.

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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. |