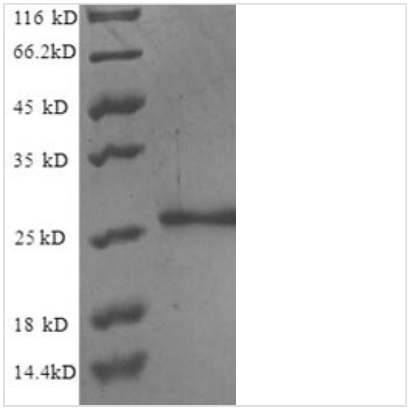
Recombinant Human Nuclear pore membrane glycoprotein 210 (NUP210), partial

Product Code	CSB-EP016195HU(N)
Relevance	Nucleoporin essential for nuclear pore assbly and fusion, nuclear pore spacing, as well as structural integrity.
Abbreviation	Recombinant Human NUP210 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.	Q8TEM1
Alias	Nuclear envelope pore membrane protein POM 210 ;POM210Nucleoporin Nup210Pore membrane protein of 210 kDa
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	LNIPKVLLPFTRATRVNFTLEASEGCYRWLSTRPEVASIEPLGLDEQQCSQKAV VQARLTQPARLTSIIFAEDITTGQVLRCDAIVDLIHDIQIVSTTRELYLEDSPLELKI QALDSEGNTFSTLAGLVFEWTIVKDSEADRFSDSHNALRILTFLESTYIPPSYIS EMEKAAKQGDTILVSGMKTGSSKLKARIQEAVYKNVRPAEVRLL
Research Area	Transport
Source	E.coli
Target Names	NUP210
Expression Region	28-238aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	27.6kDa
Protein Length	Partial
Image	



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

Description

Recombinant Human Nuclear pore membrane glycoprotein 210 (NUP210) is produced in E. coli and covers the 28-238 amino acid region of the protein. The protein includes an N-terminal 6xHis-tag and achieves greater than 90% purity, as confirmed by SDS-PAGE analysis. This partial protein appears suitable for research applications that require high-purity recombinant proteins.

Nuclear pore membrane glycoprotein 210 (NUP210) plays a critical role in the structure and function of nuclear pore complexes, which regulate the transport of molecules between the nucleus and cytoplasm. It participates in essential cellular processes such as nucleocytoplasmic transport, contributing to the maintenance of cellular homeostasis and regulation of gene expression. NUP210 has become a significant focus in studies exploring nuclear-cytoplasmic interactions.

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 Using His-Tag Pull-Down Assays

The N-terminal 6xHis-tagged NUP210 fragment (28-238aa) can be immobilized on nickel-affinity resins to identify and characterize potential binding partners within the nuclear pore complex or other cellular proteins. This partial sequence may contain important interaction domains that are likely involved in nucleocytoplasmic transport or nuclear envelope organization. The His-tag allows for efficient purification and immobilization for pull-down experiments with cell lysates or purified protein libraries. Such studies could help map the protein interaction network involving this specific region of NUP210.

2. Antibody Development and Validation

The recombinant NUP210 fragment with >90% purity can serve as an antigen for generating specific antibodies against the 28-238aa region of human NUP210. Researchers can use the purified protein for immunizing animals or

screening hybridoma clones to develop monoclonal antibodies. It can also function as a positive control in antibody validation experiments such as Western blotting, ELISA, or immunoprecipitation assays. The His-tag also allows for easy detection and quantification during antibody characterization studies.

3. Biochemical Characterization and Stability Studies

The purified NUP210 fragment can be subjected to various biochemical analyses to determine its biophysical properties, including thermal stability, pH tolerance, and aggregation behavior under different buffer conditions. Techniques such as dynamic light scattering, differential scanning fluorimetry, or analytical ultracentrifugation may provide insights into the protein's folding state and stability profile. These studies appear essential for understanding the structural properties of this nuclear pore component and optimizing conditions for further experimental applications.

4. His-Tag Based ELISA Development

The N-terminal His-tag makes possible the development of sandwich or direct ELISA assays for detecting and quantifying NUP210 interactions or for screening compound libraries. The protein can be immobilized on nickel-coated plates or detected using anti-His antibodies in various ELISA formats. This approach seems particularly useful for high-throughput screening of small molecules or other proteins that may interact with the 28-238aa region of NUP210. The >90% purity should ensure reliable and reproducible results in quantitative assay development.

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. 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.