Recombinant CND2 protein (His tag)

Catalog Number	542696
Synonyms	Barren homolog protein 1; Chromosome-associated protein H; hCAP-H; Non-SMC condensin I complex subunit H; XCAP-H homolog
Species	Human
Expression System	E. coli
Accession	Q15003
Molecular Weight	Predictes a molecular mass of 14.77 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	224-341
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 224-341 aa (Q15003) 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	This recombinant protein represents a stable and soluble fragment (residues 224-341) of human Condensin complex subunit 2 (NCAPH), a key regulatory component essential for mitotic chromosome condensation. This fragment is ideal for structural studies and biochemical assays investigating chromosome dynamics. Condensin complex subunit 2 (also known as Barren homolog protein 1 or hCAP-H) serves as a regulatory subunit of the condensin complex, which is critical for converting interphase chromatin into condensed mitotic chromosomes. The complex introduces positive supercoils into DNA and collaborates with topoisomerases to maintain chromosomal integrity. During neurogenesis, it ensures accurate chromosome condensation in neural stem cells, directly influencing neuron pool size and cortical development. Subcellularly, the protein exhibits dynamic localization—primarily cytoplasmic during interphase with chromatin-associated subpopulations, while becoming predominantly chromatin-bound during mitosis following CDK1-mediated phosphorylation. This regulated localization underscores its fundamental role in cell division and genomic stability.