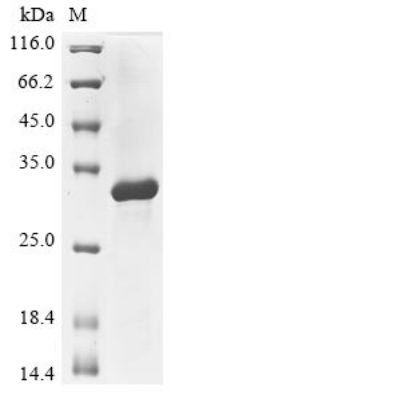
Recombinant Anemonia sulcata GFP-like non-fluorescent chromoprotein FP595

Product Code	CSB-EP887932AKE
Abbreviation	Recombinant Anemonia sulcata GFP-like non-fluorescent chromoprotein FP595 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.	Q9GZ28
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Protein
Immunogen Species	Anemonia sulcata (Mediterranean snakelocks sea anemone)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MASFLKKTMPFKTTIEGTVNGHYFKCTGKGEGNPFEGTQEMKIEVIEGGPLPF AFHILSTSC
Research Area	Biochemicals
Source	E.coli
Target Names	N/A
Expression Region	1–62aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal GST-tagged
Mol. Weight	33.5 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 Anemonia sulcata GFP-like non-fluorescent chromoprotein FP595 is produced in E. coli, spanning the complete mature protein sequence from amino acids 1 to 62. The protein carries an N-terminal GST tag and shows purity levels exceeding 85% when analyzed by SDS-PAGE. This product is designed exclusively for research purposes and lacks fluorescence properties while maintaining low endotoxin concentrations suitable for experimental work.

FP595 represents a GFP-like chromoprotein sourced from the Mediterranean snakelocks sea anemone, Anemonia sulcata. What sets this protein apart from its fluorescent relatives is its complete lack of fluorescence, which may make it particularly valuable across different research contexts. The distinctive chromophore characteristics appear to be well-suited for studies examining protein interactions, stability testing, and serving as a control in experiments requiring non-fluorescent markers.

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 Expression and Purification Optimization Studies

This GST-tagged chromoprotein appears to function as an effective model system for refining expression conditions and purification methods for marine-derived fluorescent proteins in E. coli systems. The N-terminal GST tag allows for affinity purification through glutathione-based resins, which seems ideal for testing different buffer compositions, temperature settings, and purification approaches. Scientists might find this protein helpful for establishing standardized protocols when working with other Anemonia sulcata fluorescent protein variants or similar cnidarian chromoproteins.

2. GST-Tagged Protein Interaction Assays

The GST tag creates opportunities for pull-down experiments aimed at identifying potential protein binding partners or confirming known interactions

within controlled in vitro environments. Researchers can immobilize the chromoprotein on glutathione beads and capture interacting proteins from cell lysates or purified protein solutions. This approach could prove particularly valuable when studying protein-protein interactions involving chromophore-containing proteins or when developing binding assays where the chromoprotein acts as bait.

3. Chromophore Formation and Maturation Studies

Being a non-fluorescent chromoprotein from Anemonia sulcata, this recombinant protein offers a chance to examine chromophore formation mechanisms and maturation processes within the marine-derived fluorescent protein family. Scientists may investigate which biochemical conditions influence chromophore development, analyze spectral properties of the mature chromoprotein, and compare maturation rates with other GFP-like proteins. The purified protein allows for controlled investigations of factors that might affect chromophore chemistry without the complications of cellular environments.

4. Antibody Development and Validation

The recombinant chromoprotein could function as an antigen for producing specific antibodies against Anemonia sulcata FP595 or related chromoproteins. Its high purity level (>85%) suggests it would work well in immunization protocols and subsequent antibody characterization experiments. Such antibodies might become useful research tools for detecting natural chromoproteins in Anemonia sulcata tissues or for examining distribution and expression patterns of similar proteins across cnidarian species.

5. Comparative Structural and Biochemical Analysis

This purified chromoprotein opens doors for comparative studies with other GFP-like protein family members to better understand what structural elements determine fluorescence versus non-fluorescence properties. Scientists can conduct biochemical characterization including thermal stability testing, pH sensitivity analysis, and spectroscopic examination to identify what distinguishes this non-fluorescent variant from its fluorescent cousins. The GST tag helps ensure consistent purification for reliable comparative analyses across various experimental conditions.

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.