

Spot Protein, E. coli, Recombinant (His & Myc)

General Information

Synonyms: spot;Bifunctional (p)ppGpp synthase/hydrolase Spot

Protein Construction: 1-702 aa

Species: E. coli

Expression Host: E. coli

Accession: P0AG24

Molecular Weight: 86.8 kDa (predicted)

AA Sequence:

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MYLFESLNQLIQTYLPEDQIKRLRQAYLVARDAHEGQTRSSGEPYITHPVAVACILAEMKLDYETLMAALLHDV
IEDTPATYQDMEQLFGKSVAEVGVSKLDKLFKRDKKEAQAENFRKMIMAMVQDIRVILIKLADRTHNMRTL
GSLRPDKRRRIARETLEIYSPLAHLGIHHIKTELEELGFEALYPNRYRVIKEVVKAARGNRKEMIQKILSEIEGRL
QEAGIPCRVSGREKHLYSIYCKMVLKEQRFHSIMDIYAFRIVVNDSDTCYRVLGQMHSLYKPRPGRVKDYIAIP
KANGYQSLHTSMIGPHGVPVEVQIRTEDMDQMAEMGVAAHWAYKEHGETSTTAQIRAQRWMQSLELQO
SAGSSFEFIESVKSDLFPDEIYVFTPEGRIVELPAGATPVDFAYAVHTDIGHACVGRVDRQPYPLSQPLTSGQT
VEIITAPGARPNAAWLNFVVSSEKARAKIRQLLKNLKRDDSVSLGRRLLNHALGGSRKLNLEIPQENIQRELD
KLATLDDLLAEIGLGNAMSVVAKNLQHGASIPPATQSHGHLPIKGADGVLITFAKCCRPPIGDPPIAHVSPG
KGLVIHHESCRNIRGYQKEPEKFMAVEWDKETAQEFITEIKVEMFNHQGALANLTAINTTTSNIQSLNTEEKD
GRVYSAFIRLTARDRVHLANIMRKIRVMPDVIKVTRNRN
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QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 85% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: 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, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

In eubacteria ppGpp (guanosine 3'-diphosphate 5'-diphosphate) is a mediator of the stringent response which coordinates a variety of cellular activities in response to changes in nutritional abundance. This enzyme catalyzes both the synthesis and degradation of ppGpp. The second messengers ppGpp and c-di-GMP together control biofilm formation in response to translational stress; ppGpp represses biofilm formation while c-di-GMP induces it. ppGpp activates transcription of CsrA-antagonistic small RNAs CsrB and CsrC, which downregulate CsrA's action on translation during the stringent response.

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