

Purified anti-*E. coli* RNA Sigma 70 Antibody

Catalog# / Size	663207 / 25 µg 663208 / 100 µg
Clone	2G10
Regulatory Status	RUO
Other Names	RNA pol sigma 70, rpoD, sigma D, RNA Polymerase
Isotype	Mouse IgG2b
Description	RNA polymerase transcribes DNA to synthesize RNA. Prokaryotes contain a single RNA polymerase- core RNA polymerase. RNA polymerase sigma 70 (also known as RNA pol sigma 70 and rpoD) is a part of a family of sigma factor subunits that are required for specific promoter recognition and initiation. RNA pol sigma 70 is the major housekeeping sigma factor responsible for RNA polymerase recognition out of the majority of promoters necessary to transcribe bacterial genes which are expressed during expansion.

Product Details

Verified Reactivity	<i>E. coli</i> , <i>C. trachomatis</i> , <i>M. smegmatis</i> , <i>S. aureus</i> , <i>B. pertussis</i> , <i>R. sphaeroides</i> , <i>V. parahaemolyticus</i> , <i>P. aeruginosa</i> , <i>A. tumefaciens</i> , <i>S. faecalis</i> , <i>A. globiformis</i>
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Recombinant protein
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . For Western blotting, the suggested use of this reagent is 0.1 - 1.0 µg per ml. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Clone 2G10 is extremely useful for identifying the major sigma factor from a variety of bacteria. It does not react with <i>Borellia burgdorferi</i> . Clone 2G10 recognizes epitope 470-486. Additional reported applications (for the relevant formats) include: functional assay and immunoprecipitation.
Application References	<ol style="list-style-type: none">1. Breyer MJ, <i>et al.</i> 1997. <i>J. Bacterial</i> 179:1404.2. Lesley SA, <i>et al.</i> 1989. <i>J. Biol. Chem.</i> 264:3794.3. Strickland MS, <i>et al.</i> 1988. <i>Biochemistry</i> 27:5755.
Product Citations	<ol style="list-style-type: none">1. Wan T, <i>et al.</i> 2021. <i>Molecular Cell</i>. . PubMed
RRID	AB_2814498 (BioLegend Cat. No. 663207) AB_2814499 (BioLegend Cat. No. 663208)

Antigen Details

Structure	Sigma 70 (σ^{70}) is a 70 kD transcription factor of <i>E. coli</i> RNA polymerase.
Biology Area	Cell Biology, Transcription Factors
Molecular Family	Nuclear Markers
Gene ID	947567

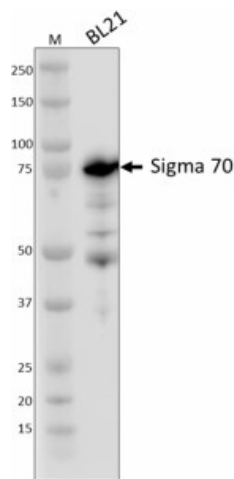
Related Protocols

[Western Blotting Protocol](#)

Other Formats

Direct-Blot™ HRP anti-*E. coli* RNA Sigma 70, Purified anti-*E. coli* RNA Sigma 70

Product Data



Whole cell extracts (15 μ g protein) from BL21 *E. coli* cells were resolved by 4-12% Bis-Tris gel electrophoresis, transferred to a PVDF membrane, and probed with 1.0 μ g/mL (1:500 dilution) of purified anti-*E. coli* RNA Sigma 70 antibody, clone 2G10, overnight at 4°C. Proteins were visualized by chemiluminescence detection using HRP Goat anti-mouse IgG antibody (Cat. No. 405306) at a 1:3000 dilution.

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