

Monoclonal Antibody to Flagellin FliC - Purified

Alternate names: JW1908, b1923, flaF, fliC, hag

Catalog No.: AM33057PU-S

Quantity: 25 µg

Concentration: 0.5 mg/ml

Background: FliC is a protein expressed in many motile enteric bacteria including *Salmonella* and *Escherichia*. The C- and N-terminal regions of the protein among various strains of bacteria are well-conserved. However, there is great variability of length and amino acid sequence in the central region. For example, *E. coli* flagellin have been reported to vary in size from 36 K to 69 K in MW. FliC is a subunit protein that polymerizes (in conjunction with other proteins) to form the filaments of bacterial flagella in a precise order. Flagellin is a potent ligand of toll-like receptor 5 (TLR5). By binding to TLR5, flagellin induces activation of NF-κB and triggers the production of cytokines and innate immune responses.

Structure: Member of the bacterial flagellin family; 51-53 kD in *Salmonella* and *Escherichia*.

Distribution: Expressed in many motile enteric bacteria including *Salmonella* and *Escherichia*.

Interaction: C-terminus of FliC binds to the export chaperone FliS. This interaction is thought to facilitate FliC polymerization and prevent FliC from polymerizing prematurely in cytosol.

Uniprot ID: [P04949](#)

NCBI: [AP_002538.1](#)

GeneID: [949101](#)

Host / Isotype: Mouse / IgG1

Recommended Isotype Controls: AM03095PU-N

Clone: FLIC-1

Format: **State:** Liquid purified IgG fraction
Purification: Affinity Chromatography
Buffer System: PBS, pH 7.2
Preservatives: 0.09% Sodium Azide

Applications: **Western blotting:** Each lot of this antibody is quality control tested.
Recommended Dilutions: Use 5 µg antibody per 5 ml antibody dilution buffer for each mini-gel.

Immunoprecipitation (Reported).

Immunofluorescence (Reported).

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

- Specificity:** FliC is expressed in motile bacteria including *Salmonella* and *E. Coli*. The epitope recognized by this antibody is not known. There is a possibility that some Flagellins are not recognized by this *FLIC-1* antibody.
- Storage:** Store undiluted at 2-8°C.
DO NOT FREEZE!
Shelf life: one year from despatch.
- General Readings:**
1. Uchiya K, Nikai T. *Salmonella* virulence factor SpiC is involved in expression of flagellin protein and mediates activation of the signal transduction pathways in macrophages. *Microbiology*. 2008 Nov;154(Pt 11):3491-502. doi: 10.1099/mic.0.2008/021667-0. PubMed PMID: 18957602.
 2. Huang LY, Dumontelle JL, Zolodz M, Deora A, Mozier NM, Golding B. Use of toll-like receptor assays to detect and identify microbial contaminants in biological products. *J Clin Microbiol*. 2009 Nov;47(11):3427-34. doi: 10.1128/JCM.00373-09. Epub 2009 Sep 2. PubMed PMID: 19726599.
 3. Induction of *Salmonella* pathogenicity island 1 under different growth conditions can affect *Salmonella*-host cell interactions in vitro. Ibarra JA, Knodler LA, Sturdevant DE, Virtaneva K, Carmody AB, Fischer ER, Porcella SF, Steele-Mortimer O. *Microbiology (Reading, England)*. 2010 156:1120-33. [PubMed:20035008] [PMC:PMC2848694]
 4. Crawford RW, Reeve KE, Gunn JS. Flagellated but not hyperfimbriated *Salmonella enterica* serovar Typhimurium attaches to and forms biofilms on cholesterol-coated surfaces. *J Bacteriol*. 2010 Jun;192(12):2981-90. doi: 10.1128/JB.01620-09. Epub 2010 Jan 29. PubMed PMID: 20118264.
 5. Knodler LA, Vallance BA, Celli J, Winfree S, Hansen B, Montero M, et al. Dissemination of invasive *Salmonella* via bacterial-induced extrusion of mucosal epithelia. *Proc Natl Acad Sci U S A*. 2010 Oct 12;107(41):17733-8. doi: 10.1073/pnas.1006098107. Epub 2010 Sep 27. PubMed PMID: 20876119.
 6. Kajikawa A, Nordone SK, Zhang L, Stoeker LL, LaVoy AS, Klaenhammer TR, et al. Dissimilar properties of two recombinant *Lactobacillus acidophilus* strains displaying *Salmonella* FliC with different anchoring motifs. *Appl Environ Microbiol*. 2011 Sep;77(18):6587-96. doi: 10.1128/AEM.05153-11. Epub 2011 Jul 22. PubMed PMID: 21784918.
 7. Eom JS, Kim JS, Jang JI, Kim HG, Bang IS, Park YK. Effect of *iacP* mutation on flagellar phase variation in *Salmonella enterica* serovar typhimurium strain UK-1. *J Bacteriol*. 2012 Aug;194(16):4332-41. doi: 10.1128/JB.00076-12. Epub 2012 Jun 8. PubMed PMID: 22685287.

Pictures: Recombinant flagellin protein (50 ng per lane) was resolved by electrophoresis, transferred to nitrocellulose, and probed with monoclonal antibody against FliC. Protein was visualized using a goat anti-mouse secondary conjugated to HRP and a chemiluminescence detection system.

