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Monoclonal Antibody to Flagellin Flic - Purified

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

Catalog No.: TA327967

Quantity: 0.1 mg

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-kB 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.