

Nucleotide sequence of the *Salmonella typhimurium* *himA* geneZhu Juan Li*, David Hillyard¹ and Patrick HigginsDepartment of Biochemistry, University of Alabama at Birmingham, Birmingham, AL 35294 and ¹Department of Pathology, Howard Hughes Medical Institute, University of Utah, Salt Lake City, UT 84132, USA

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Integration host factor (IHF) is a small basic DNA binding protein of bacteria involved in numerous biochemical pathways (1). IHF bends linear DNA (2) and is proposed to organize supercoiled DNA into an interwound branched form called a superloop (3). The *Salmonella typhimurium* *himA* gene was cloned from a strain carrying a closely linked "locked-in" MudP prophage (4). Like *E. coli* K12 *himA* (5), *Salmonella* Lt2 *himA* is in an operon with the *pheT* gene. It differs from the K12 gene at 9 neutral third codon positions and 3 base pair differences result in amino acid substitutions (underlined). The coding strand is shown with the predicted amino acid sequence below.

pheT

-60 TCGCCAAATGTGTAGAGGCATTA AAAAGAGCGATTCCAGGCATCATTGAGGGATTGAACCT
ValAlaLysCysValGluAlaLeuLysGluArgPheGlnAlaSerLeuArgAspEnd

himA

1 ATGGCGCTTACAAAAGCTGAAATGTCAGAATATCTGTTTGATAAGCTTGGGCTTAGCAAG
MetAlaLeuThrLysAlaGluMetSerGluTyrLeuPheAspLysLeuGlyLeuSerLys

61 CGGGATGCCAAAGAAGCTGGTTGAACTGTTTTTCGAAGAGATCCGTCGTCTCTGGAAAAC
ArgAspAlaLysGluLeuValGluLeuPhePheGluGluIleArgArgAlaLeuGluAsn

121 GGTGAGCAGGTGAAACTCTCTGGTTTTGGTAACTTCGGTCTGCGTGATAAAAAATCAACGT
GlyGluGlnValLysLeuSerGlyPheGlyAsnPheGlyLeuArgAspLysAsnGlnArg

181 CCGGGGCGTAACCCGAAAACGGGTGAAGATATTCCTATTACAGCACGGCGCGTGGTGACC
ProGlyArgAsnProLysThrGlyGluAspIleProIleThrAlaArgArgValValThr

241 TTCAGACCCGGGCGAGAAGTTAAAGAGCCGGGTGCGAAAAGCGCTTCGCCCAAAGAAGAGTAA
PheArgProGlyGlnLysLeuLysSerArgValGluSerAlaSerProLysGluGluEnd

301 TCAGATCCAGGCATAAATCCATCAGGGTGTATTGCGGCAGATACGCTGCCTACCCGAAAG

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