

HMG1

Native, High Mobility Group 1 bovine, calf thymus

Cat. No.	Amount
PR-757	10 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT and 20% glycerol.

Activity

1 ng is required for a gel mobility shift assay in a 20 µl reaction to super-shift TBP-DNA complex, 20 ng are required for reconstituted transcription assays and 100 ng are sufficient for a protein-protein interaction assay.

Molecular Weight

26 kDa

Application

HMG1 has been applied in *in vitro* transcription assays, DNA-protein and protein-protein interaction assays.

Purity

> 95% by SDS-PAGE

Description

High Mobility Group 1 (HMG1) is a 26 kDa highly conserved non-sequence-specific DNA-binding nuclear protein. Mammalian HMG1 has two homologous DNA-binding domains (HMG boxes A and B, each of 80-90 amino-acid residues), linked by a short basic region to an acidic C-terminal domain containing 30 consecutive Asp and Glu residues. HMG1 has been implicated in a number of fundamental biological processes including transcription, replication, and recombination, in which it plays a role in manipulating DNA structure by bending, looping, compaction, or unwinding, or by directly contacting with distinct cellular proteins. HMG1 can act as a repressor, by interacting with TBP to block preinitiation complex formation or as an activator, by facilitating the binding of various transcription factors to their cognate DNA sequences. Most recently, it was discovered that HMG1 is a late mediator of delayed endotoxin lethality by activating downstream cytokine release.

HMG1 was purified from calf thymus using several steps of conventional and FPLC chromatography. The purified calf thymus HMG1 protein is greater than 95% homogeneous and contains no detectable protease, DNase, and RNase activity.

Selected References:

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