



Product Datasheet

Product Name	Heat Shock Transcription Factor-1 Human Recombinant
Cata No	CB501408
Source	<i>Escherichia Coli.</i>
Synonyms	HSF-1, HSF1, HSTF-1, HSTF1, Heat shock factor protein 1, Heat shock transcription factor 1.

Description

The transcription of heat-shock genes is rapidly induced after temperature stress in response to environmental changes, and it is also involved in oogenesis, spermatogenesis, and placental development. Hsp90, is a major repressor of HSF1 gene. HSF1 is known for its participation in heat shock response. HSF1 protein regulates the transcription of hundreds of targets, such as genes involved in protein folding, detoxification, energy generation, carbohydrate metabolism, and cell wall organization.

HSF1 binds to MTA1 in vitro & in breast carcinoma. Suppression of estrogen-dependent transcription may contribute to role of HSF1 in cancer.

Human cancer lines of diverse origins express higher dependence on HSF1 function to maintain proliferation and survival than their non-transformed counterparts.

HSF1 induces anticoagulation and relaxation factors in vascular endothelial cells and could therefore be used to treat cardiovascular disease. HSF1 is directly involved in the regulation of HO1 having an anti-oxidative role.

NF-kappaB and HSF1 are systemically activated in human acute pancreatitis.

HSF1 activation protects against severity of pancreatitis.

HSF is a vital transcription factor which plays a role in up-regulation of VDUP1 expression through stresses such as elevated density and serum

deprivation cultures.

Recombinant HSF1 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 549 amino acids and having a molecular mass of 59 kDa. The HSF1 protein is fused to His-Tag at N-terminus.

Physical Appearance

Sterile filtered colorless solution.

Purity

Greater than 75.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Formulation

The HSF1 protein (1mg/ml) contains 20mM Tris pH-8, 50mM NaCl and 1mM DTT.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Avoid multiple freeze-thaw cycles.

Sequence

MGSSHHHHHH SSGLVPRGSH MDLPVGPAA
GPSNVPAFLT KLWTLVSDPD TDALICWSPS
GNSFHVFDQG QFAKEVLPKY FKHNMMASFV
RQLNMYGFRK VVHIEQGGLV KPERDDTEFQ
HPCFLRGQEQ LLENIKRKVT SVSTLKSEDI
KIRQDSVTKL LTDVQLMKGK QECMDSKLLA
MKHENEALWR EVASLRQKHA QQQKVVNCLI

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QFLISLVQSN RILGVKRKIP LMLNDSGSAH
SMPKYSRQFS LEVHVGSGPY SAPSPAYSSS
SLYAPDAVAS SGPIISDITE LAPASPMASP
GGSIDERPLS SSPLVRVKEE PPSPQSPRV
EEASPGRPSS VDTLLSPTAL IDSILRESEP
APASVTALTD ARGHTDTEGR PPSPPPTSTP
EKCLSVACLD KNELSDHLDA MDSNLDNLQT
MLSSHGFSVD TSALLDLFSP SVTVPMDSLP

DLDSSLASIQ ELLSPQPPPPPEADSSRR
SGKQLVHYTA QPLFLLDPGS VDTGSNDLPV
LFELGEGSYF SEGDGFAEDP TISLLTGSEP
PKAKDPTVS

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