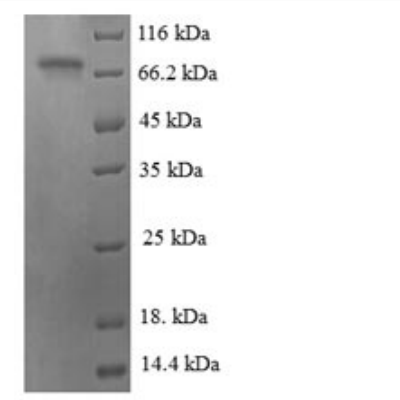
Recombinant Human Cyclic AMP-dependent transcription factor ATF-2 (ATF2)

Product Code	CSB-EP002270HU
Relevance	Transcriptional activator which regulates the transcription of various genes, including those involved in anti-apoptosis, cell growth, and DNA damage response. Dependent on its binding partner, binds to CRE (cAMP response elent) consensus sequences (5'-TGACGTCA-3') or to AP-1 (activator protein 1) consensus sequences (5'-TGACTCA-3'). In the nucleus, contributes to global transcription and the DNA damage response, in addition to specific transcriptional activities that are related to cell development, proliferation and death. In the cytoplasm, interacts with and perturbs HK1- and VDAC1-containing complexes at the mitochondrial outer mbrane, thereby impairing mitochondrial mbrane potential, inducing mitochondrial leakage and promoting cell death. The phosphorylated form (mediated by ATM) plays a role in the DNA damage response and is involved in the ionizing radiation (IR)-induced S phase checkpoint control and in the recruitment of the MRN complex into the IR-induced foci (IRIF). Exhibits histone acetyltransferase (HAT) activity which specifically acetylates histones H2B and H4 in vitro. In concert with CUL3 and RBX1, promotes the degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM. Can elicit oncogenic or tumor suppressor activities depending on the tissue or cell type.
Abbreviation	Recombinant Human ATF2 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P15336
Alias	Activating transcription factor 2;Cyclic AMP-responsive element-binding protein 2 ;CREB-2 ;cAMP response element-binding protein CRE-BP1
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MKFKLHVNSARQYKDLWNMSDDKPFLCTAPGCGQRFTNEDHLAVHKHKHEM TLKFGPARNDSVIVADQTPTPTRFLKNCEEVGLFNELASPFENEFKKASEDDIK KMPLDLSPLATPIIRSKIEEPSVVETTHQDSPLPHPESTTSDEKEVPLAQTAQPT SAIVRPASLQVPNVLLTSSDSSVIIQQAVPSPTSSTVITQAPSSNRPIVPVPGPF PLLLHLPNGQTMPVAIPASITSSNVHVPAAVPLVRPVTMVPSVPGIPGPSSPQP VQSEAKMRLKAALTQQHPPVTNGDTVKGHGSGLVRTQSEESRPQSLQQPAT STTETPASPAHTTPQTQSTSGRRRRAANEDPDEKRRKFLERNRAAASRCRQK RKVWVQSLEKKAEDLSSLNGQLQSEVTLLRNEVAQLKQLLLAHKDCPVTAMQ KKSGYHTADKDDSSEDISVPSSPHTEAIQHSSVSTSNGVSSTSKAEAVATSVLT QMADQSTEPALSQIVMAPSSQSQPSGS

Research Area	Transcription
Source	E.coli
Target Names	ATF2
Expression Region	1-505aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	70.5kDa
Protein Length	Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

A cDNA sequence coding for full-length human cyclic AMP-dependent transcription factor ATF2 was inserted a 6xHis-SUMO-tag at the N-terminus and then expressed in E.coli. The resulting protein consists of 1-505aa of human ATF2 and has a calculated molecular weight of 70.5 kDa. Its purity is over 90% determined by SDS-PAGE. Under reducing conditions, the gel presented a molecular mass band of about 73 kDa. Glycosylation contributes to the slightly higher molecular mass. This recombinant ATF2 protein may be used for specific antibody production or in the studies of ATF2-related transcription.

Activating transcription factor 2 (ATF2) is a member of the activating protein-1 (AP1) transcription factor family that regulates gene expression through homo- or hetero-dimerization with other AP1 transcription factors. ATF2 is also a vital mediator of mammalian cell responses to various stimuli, including stress. Alteration of ATF2 expression and localization has also been associated with the pathology, progression, and chemoresistance of extramammary Paget's disease, as well as in prostate and head and neck squamous cancers.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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