

ATF2 Protein, Human, Recombinant (His & GST)

General Information

Synonyms:	CREB2;CRE-BP1;CREB-2;TREB7;activating transcription factor 2;HB16
Protein Construction:	A DNA sequence encoding full length of human ATF2 (P15336-1) (Met 1-Ser 505) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P15336-1
Molecular Weight:	82.4 kDa (predicted); 85 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 80 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, pH 8.0, 10% gly. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Activating transcription factor 2, also known as ATF2, is a member of the leucine zipper family of DNA-binding proteins that binds to the cAMP response element. Its activity is enhanced after phosphorylation by stress-activated protein kinases such as c-Jun N-terminal kinase and p38. ATF2 has been found to be a target of the JNK signal transduction pathway and mediate adenovirus E1A-inducible transcriptional activation. ATF2 is also been

reported playing roles in TGF- β signaling pathway. It has been shown that the transcription factor ATF2 is bound by a hetero-oligomer of Smad3 and Smad4 upon TGF- β stimulation. Studies indicate that ATF-2 plays a central role in TGF- β signaling by acting as a common nuclear target of both Smad and TAK1 pathways.

Reference

Livingstone C, et al. (1995) ATF-2 contains a phosphorylation-dependent transcriptional activation domain. EMBO J. 14 (8): 1785-97.

Gupta S, et al. (1995) Transcription factor ATF2 regulation by the JNK signal transduction pathway. Science . 267 (5196): 389-93.

Sano Y, et al. (1999) ATF-2 Is a Common Nuclear Target of Smad and TAK1 Pathways in Transforming Growth Factor- β Signaling. The Journal of Biological Chemistry. 274: 8949-57.

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