
ATF6 Antibody Blocking Peptide

Catalog Number: bs-1634P

Activity: Not tested

Purification: HPLC

Storage: Shipped at 4°C. Stored at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: ATF6 is a transcription factor that acts during endoplasmic reticulum stress by activating unfolded protein response target genes. It binds DNA on the 5'-CCAC[GA]-3' half of the ER stress response element (ERSE) (5'-CCAAT-N(9)-CCAC[GA]-3') and of ERSE II (5'-ATTGG-N-CCACG-3'). Binding to ERSE requires binding of NF-Y to ERSE. ATF6 could also be involved in activation of transcription by the serum response factor. ATF6 exists as a homodimer and heterodimer with ATF6 beta. The dimer interacts with the nuclear transcription factor Y (NF-Y) trimer through direct binding to NF-Y subunit C (NF-YC). It also interacts with the transcription factors GTF2I, YY1 and SRF. Under ER stress the cleaved N-terminal cytoplasmic domain translocates into the nucleus. The basic domain of ATF6 functions as a nuclear localization signal and the basic leucine zipper domain is sufficient for association with the NF-Y trimer and binding to ERSE. During the unfolded protein response an approximately 50 kDa fragment containing the cytoplasmic transcription factor domain is released by proteolysis. The cleavage seems to be performed sequentially by site 1 and site 2 proteases. ATF6 is N glycosylated, phosphorylated in vitro by MAPK14/P38MAPK and belongs to the bZIP family.