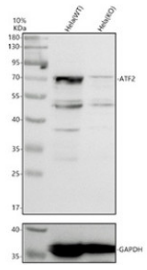
ATF2 Polyclonal Antibody / ATF2 Rabbit Antibody (FY13681)

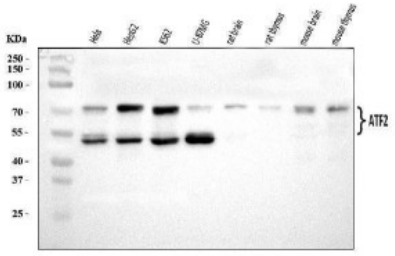
Catalog No.	Formulation	Size
FY13681	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

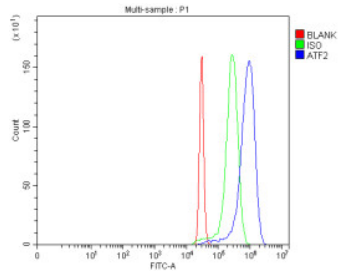
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P15336
Applications	Western blot: 0.5-1ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5 ug/ml
Limitations	This ATF2 Polyclonal Antibody / ATF2 Rabbit Antibody is supplied exclusively for research use.



ATF2 Polyclonal Antibody WB Analysis of Wild-Type and ATF2 Knockout HeLa Cells. Western blot analysis of human HeLa wild-type (WT, lane 1) and ATF2 knockout (KO, lane 2) whole-cell lysates using ATF2 Rabbit Antibody. A prominent immunoreactive band near 70 kDa in WT lysate is markedly reduced in KO lysate, supporting recognition of ATF2. A faint band remains near this position in the KO lane, while additional lower-molecular-weight bands are detected in both samples. GAPDH serves as the loading control.



ATF2 Polyclonal Antibody WB Analysis of Human Cell Lines and Rat and Mouse Tissues. Western blot analysis of human HeLa (lane 1), HepG2 (lane 2), K562 (lane 3), and U-87 MG (lane 4) cell lysates, rat brain (lane 5), rat thymus (lane 6), mouse brain (lane 7), and mouse thymus (lane 8) tissue lysates using ATF2 Rabbit Antibody. Immunoreactive bands are detected near 70-75 kDa across the tested samples, consistent with the supplier-reported migration of ATF2. Additional bands near 50-55 kDa are visible in several human cell lysates, particularly HeLa, HepG2, K562, and U-87 MG.



ATF2 Polyclonal Antibody FACS Analysis of Human HeLa Cells. Flow cytometry analysis of fixed and permeabilized human HeLa cells using ATF2 Rabbit Antibody at 1 ug per 10^6 cells. The blue histogram represents ATF2 antibody staining, the green histogram represents the rabbit IgG isotype control, and the red histogram represents the blank control. A rightward fluorescence shift is observed in the antibody-stained population relative to both controls. Cells were fixed with 4% paraformaldehyde and permeabilized before intracellular staining.

Description

ATF2 Polyclonal Antibody / ATF2 Rabbit Antibody targets activating transcription factor 2 (ATF2), a member of the ATF/CREB family of basic leucine zipper transcription factors. ATF2 regulates gene expression by binding cyclic AMP response elements (CREs) and related regulatory sequences within DNA. It participates in transcriptional programs controlling cell proliferation, differentiation, survival, and responses to environmental stress. Its activity is influenced by extracellular signaling pathways and interactions with other transcriptional regulators.

ATF2 contains a basic DNA-binding domain and a leucine zipper region that enables homodimerization and heterodimerization. One of its important binding partners is c-Jun, with which it forms transcriptional complexes associated with activator protein 1 (AP-1) signaling. These complexes regulate genes involved in inflammation, cellular growth, and adaptation to changing environmental conditions. The transcriptional effects of ATF2 depend on the composition of its protein complexes and the regulatory sequences present within target genes.

Phosphorylation is a central mechanism controlling ATF2 transcriptional activity. Stress-activated protein kinases, particularly p38 mitogen-activated protein kinase (MAPK) and c-Jun N-terminal kinase (JNK), phosphorylate ATF2 at Thr69 and Thr71. These modifications promote transcriptional activation in response to inflammatory cytokines, ultraviolet radiation, oxidative stress, and other cellular challenges. Through these signaling pathways, ATF2 helps coordinate changes in gene expression with the cellular response to stress.

ATF2 has also been reported to possess intrinsic histone acetyltransferase activity under experimental conditions, including acetylation of histones H2B and H4. This activity suggests a potential connection between sequence-specific transcriptional regulation and chromatin modification. Additional functions have been described in DNA damage responses, neuronal development, and cellular differentiation. ATF2 can participate in distinct transcriptional programs depending on its phosphorylation state, interacting proteins, and intracellular localization.

Altered ATF2 expression and signaling have been investigated in cancer, inflammatory disorders, and neurological conditions. Its effects on cell proliferation and survival are context-dependent, reflecting the complexity of the signaling networks in which it participates. ATF2 Polyclonal Antibody supports research into the regulation of this transcription factor and its involvement in MAPK signaling, AP-1 transcriptional activity, and cellular stress responses.

For studies requiring a monoclonal alternative, explore our ATF2 Antibody PCRP-ATF2-1B4, which features HuProt protein microarray validation and complementary cellular staining data.

Application Notes

Users should optimize the working dilution of the ATF2 Polyclonal Antibody / ATF2 Rabbit Antibody for their specific experimental setup.

Immunogen

The ATF2 Polyclonal Antibody was generated using e. coli-derived human activating transcription factor 2 recombinant protein (amino acids M1-H454).

Storage

Once reconstituted, refrigerate the ATF2 Polyclonal Antibody at 4oC for no longer than one month. For extended storage, freeze aliquots at -20oC for up to six months and avoid repeated freeze-thaw cycles.

Alternate Names

Activating transcription factor 2 antibody, ATF-2 antibody, CRE-binding protein 2 antibody, CREB2 antibody, cAMP response element-binding protein 2 antibody, Cyclic AMP-dependent transcription factor ATF-2 antibody, HB16 antibody, TREB7 antibody, ATF2 transcription factor antibody, ATF2 leucine zipper protein antibody

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