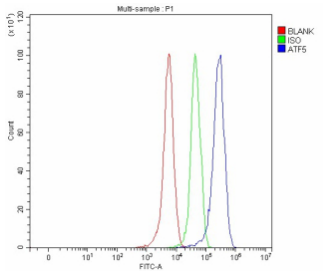
ATF5 Antibody / Activating transcription factor 5 (FY12904)

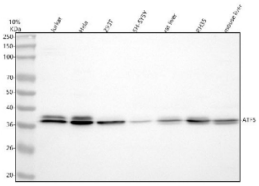
Catalog No.	Formulation	Size
FY12904	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9Y2D1
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This ATF5 antibody is available for research use only.



Flow Cytometry analysis of 293T cells using anti-ATF5 antibody. Overlay histogram showing 293T cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ATF5 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of ATF5 using anti-ATF5 antibody. Lane 1: human Jurkat whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human SH-SY5Y whole cell lysates, Lane 5: rat liver tissue lysates, Lane 6: rat RH35 whole cell lysates, Lane 7: mouse liver tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ATF5 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A prominent ~37 kDa doublet is observed in Jurkat and HeLa lysates, consistent with phosphorylated and unmodified forms of ATF5. Rat and mouse samples show a similar but weaker doublet, reflecting isoform and modification differences reported in the literature.

Description

ATF5 antibody detects Activating transcription factor 5, a stress-responsive transcriptional regulator that modulates cell survival, differentiation, and neural development. Encoded by the ATF5 gene on chromosome 19q13.33, this protein is part of the activating transcription factor/cAMP response element-binding (ATF/CREB) family. ATF5 plays key roles in adaptive stress response, neuronal maturation, and maintenance of cellular homeostasis under nutrient deprivation, hypoxia, or endoplasmic reticulum stress.

Structurally, ATF5 is a 282-amino-acid nuclear protein of approximately 33 kilodaltons containing a basic leucine zipper (bZIP) domain that mediates DNA binding and dimerization with other bZIP family members. Through its N-terminal transactivation domain, ATF5 regulates gene expression involved in apoptosis suppression, differentiation control, and autophagy induction. It is ubiquitously expressed but shows high abundance in neural tissues, liver, and testis, where it participates in differentiation and stress adaptation.

The ATF5 antibody is widely used in neuroscience, oncology, and stress physiology research to study transcriptional regulation and survival signaling. Western blot analysis detects a 33 kilodalton band corresponding to ATF5, while immunofluorescence reveals strong nuclear localization and induction under stress conditions. This antibody enables researchers to analyze transcriptional programs governing neurogenesis, stress adaptation, and tumor resistance.

Functionally, ATF5 promotes cell survival under stress by inducing anti-apoptotic genes such as BCL2 and HSPA5 while repressing pro-apoptotic transcriptional regulators. In neurons, ATF5 regulates differentiation of neural progenitors and glial cells, influencing brain development and repair. In cancer cells, ATF5 expression confers resistance to nutrient and hypoxia-induced apoptosis, contributing to tumor growth and therapy resistance. The ATF5 antibody provides a reliable reagent for monitoring ATF5 activity in normal and stress-related transcriptional responses. NSJ Bioreagents validates this antibody for its applications, ensuring sensitive and consistent performance for gene regulation and stress signaling studies.

Application Notes

Optimal dilution of the ATF5 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ATF5 recombinant protein (Position: L11-R275) was used as the immunogen for the ATF5 antibody.

Storage

After reconstitution, the ATF5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.