

DESCRIPTION

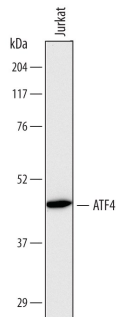
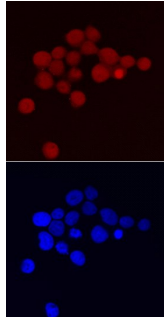
Species Reactivity	Human
Specificity	Detects human ATF4 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # 739441
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human ATF4 Met1-Pro351 Accession # P18848
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human ATF4 by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human ATF4 Antigen Affinity-purified Monoclonal Antibody (Catalog # MAB7218) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for ATF4 at approximately 47 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p>  <p>ATF4 in Jurkat Human Cell Line. ATF4 was detected in immersion fixed Jurkat human acute T-cell leukemia cell line using Mouse Anti-Human ATF4 Monoclonal Antibody (Catalog # MAB7218) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei and cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

ATF4 is an approximately 38 kDa member of the bzip family of transcription factors. It plays an important role in autophagy, the unfolded protein response, and the response to oxygen and nutrient deprivation. These functions are regulated by the dimerization of ATF4 with the leucine zipper protein FOS. ATF4 contains a basic DNA-binding domain (aa 280-300) and a leucine zipper domain (aa 306-334). Human ATF4 shares 87% aa sequence identity with mouse and rat ATF4.