Datasheet for ABIN1741068

anti-ATF4 antibody (AA 25-327) (PerCP)

3 Images

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Overview

Quantity:	100 µg
Target:	ATF4
Binding Specificity:	AA 25-327
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This ATF4 antibody is conjugated to PerCP
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunofluorescence (IF)

Product Details

Immunogen:	Fusion protein amino acids 25-327 of human ATF4. 86% identical to rat, and 85% identical to mouse. <50% identity with ATF5.
Clone:	S360A-24
Isotype:	IgG2a
Specificity:	Detects ~60 kDa. Does not cross-react with ATF5.
Cross-Reactivity:	Human, Rat
Purification:	Protein G Purified

Target Details

Target:	ATF4
Alternative Name:	ATF4 (ATF4 Products)
Background:	Cyclic AMP-dependent transcription factor ATF-4 (ATF4) is a basic leucine-zipper (bZip) transcription factor, which regulates amino acid metabolism, DNA damage repair, chromatin remodeling, and apoptosis in response to cellular and ER stress. ATF4 works with various proteins, such as C/EBP homology protein (CHOP), aspargine synthetase (ASNS), and cAMP response element (CRE) among others to mediate cellular stress. ATF4 also regulates glucose homeostasis by suppressing beta-cell proliferation and insulin production. Furthermore, ATF4 targets the histone demethylase JMJD3 to alter chromatin structure and enhance gene transcription in response to amino acid deprivation.
Gene ID:	468
NCBI Accession:	NP_001666
UniProt:	P18848
Pathways:	Thyroid Hormone Synthesis, Myometrial Relaxation and Contraction, ER-Nucleus Signaling, Unfolded Protein Response

Application Details

Application Notes:	• WB (1:1000) • optimal dilutions for assays should be determined by the user.
Comment:	1 µg/ml of ABIN1741068 was sufficient for detection of ATF4 in 20 µg of rat brain lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.
Restrictions:	For Research Use only

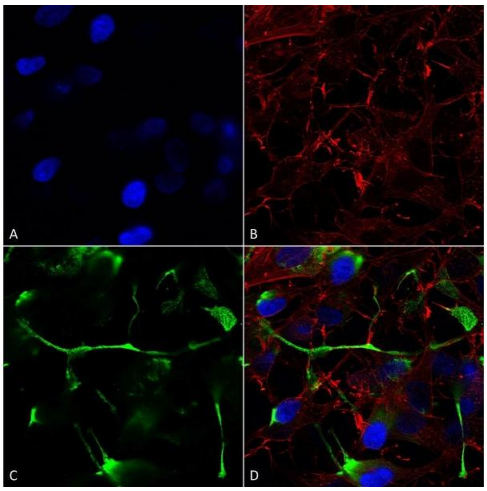
Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.1 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Handling

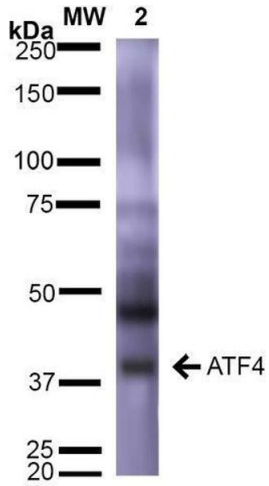
Storage:	4 °C
Storage Comment:	Conjugated antibodies should be stored at 4°C

Images



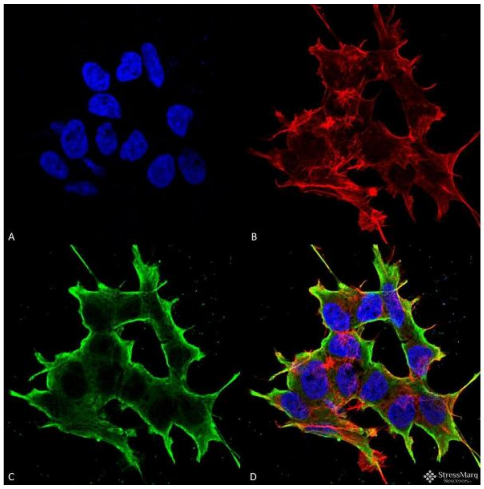
Immunocytochemistry

Image 1. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-ATF4 Monoclonal Antibody, Clone S360A-24 (ABIN1741068). Tissue: Neuroblastoma cells (SH-SY5Y). Species: Human. Fixation: 4 % PFA for 15 min. Primary Antibody: Mouse Anti-ATF4 Monoclonal Antibody (ABIN1741068) at 1:200 for overnight at 4 °C with slow rocking. Secondary Antibody: AlexaFluor 488 at 1:1000 for 1 hour at RT. Counterstain: Phalloidin-iFluor 647 (red) F-Actin stain, Hoechst (blue) nuclear stain at 1:800, 1.6 mM for 20 min at RT. (A) Hoechst (blue) nuclear stain. (B) Phalloidin-iFluor 647 (red) F-Actin stain. (C) ATF4 Antibody (D) Composite.



Western Blotting

Image 2. Western Blot analysis of Rat Brain showing detection of ~39 kDa (isoform 2) ATF4 protein using Mouse Anti-ATF4 Monoclonal Antibody, Clone S360A-24 . Lane 1: Molecular Weight Ladder (MW). Lane 2: Rat Brain. Load: 15 µg. Block: 5% Skim Milk in 1X TBST. Primary Antibody: Mouse Anti-ATF4 Monoclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Goat Anti-Mouse IgG: HRP at 1:2000 for 60 min at RT. Color Development: ECL solution for 5 min at RT. Predicted/Observed Size: ~39 kDa (isoform 2).



Immunofluorescence (fixed cells)

Image 3. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-ATF4 Monoclonal Antibody, Clone S360A-24 . Tissue: Neuroblastoma cell line (SK-N-BE). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-ATF4 Monoclonal Antibody at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:100 for 60 min at RT. Counterstain: Phalloidin Texas Red F-Actin stain; DAPI (blue) nuclear stain at 1:1000; 1:5000 for 60 min RT, 5 min RT. Localization: Cytoplasm, Cell Membrane. Magnification: 60X. (A) DAPI (blue) nuclear stain (B) Phalloidin Texas Red F-Actin stain (C) ATF4 Antibody (D) Composite.