

#11815 Store at -20°C

ATF-4 (D4B8) Rabbit mAb



Cell Signaling
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC, ChIP, ChIP-seq, C&R, C&T	H M R	Endogenous	49	Rabbit IgG	#P18848	468

Product Usage Information

For optimal ChIP and ChIP-seq results, use 2.5 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using the CUT&RUN Assay Kit #86652.

The CUT&Tag dilution was determined using CUT&Tag Assay Kit #77552.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (Immunocytochemistry)	1:100 - 1:400
Chromatin IP	1:200
Chromatin IP-seq	1:200
CUT&RUN	1:200
CUT&Tag	1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

ATF-4 (D4B8) Rabbit mAb recognizes endogenous levels of total ATF-4 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human ATF-4 protein.

Background

ATF-4, an activating transcription factor/cAMP-response element-binding protein family member, functions in the PERK and eIF2α ER stress responsive pathway (1-3). ER stress represses the translation of the majority of mRNAs, but selectively stimulates the translation of certain mRNAs including that of ATF-4 (2). Induced expression of ATF-4 increases the expression of genes critical for the recovery from ER stress (4).

Background References

1. Fawcett, T.W. et al. (1999) *Biochem J* 339 (Pt 1), 135-41.
2. Harding, H.P. et al. (2000) *Mol Cell* 6, 1099-108.
3. van Huizen, R. et al. (2003) *J Biol Chem* 278, 15558-64.
4. Yusta, B. et al. (2006) *Cell Metab* 4, 391-406.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)
ChIP: Chromatin IP **ChIP-seq:** Chromatin IP-seq **C&R:** CUT&RUN **C&T:** CUT&Tag

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses

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