

Anti-Human BATF, monoclonal (clone R451.2.1E10)

Recommended name: Basic leucine zipper transcriptional factor ATF-like
Alternative name(s): B-cell-activating transcription factor; Short names: B-ATF; SFA-2

Cat. No. m14-108
Lot. No. 20150728.L.I

Quantity: 100 µg
Storage: -20 °C



FOR RESEARCH USE ONLY

NOT FOR USE IN HUMANS

DATASHEET Page 1 of 2

Uniprot / NCBI Summary

UniProt

Primary Accession # [Q16520](#)
Secondary Accession # [n/a](#)

NCBI

GI # [5453563](#)
GenID [10538](#)
Accession # [NP_006390](#)
GenBank Nucleotide # [NM_006399.3](#)

Molecular Weight 14,120 Da (125 aa)

AP-1 family transcription factor that controls the differentiation of lineage-specific cells in the immune system: specifically mediates the differentiation of T-helper 17 cells (Th17), follicular T-helper cells (Tfh), CD8+ dendritic cells and class-switch recombination (CSR) in B-cells. Controls differentiation of T-helper cells producing interleukin-17 (Th17 cells) by binding to Th17-associated gene promoters: regulates expression of the transcription factor RORC itself and RORC target genes such as IL17 (IL17A or IL17B). Also involved in differentiation of follicular T-helper cells (Tfh) by directing expression of BCL6 and MAF. In B-cells, involved in class-switch recombination (CSR) by controlling the expression of both AICDA and of

Continued on page 2.

Physical Characteristics

Quantity: 100 µg

Concentration: 1.0 mg/ml

Host / Isotype: mouse mouse IgG2b

Clonality: monoclonal; ID R451.2.1E10

Immunogen: recombinant protein corresponding to aa residues 34-118 of human BATF

Purification: affinity-chromatography using Protein G

Formulation: 30% glycerol, 1x PBS, 0.02% sodium azide

Specificity: monospecific for human BATF; see microarray analysis below

Reactivity: human

Stability/Storage: 12 months long term: -20 °C; short term: 4 °C; avoid freeze-thaw cycles; aliquot as required

Handling Notes: small volumes of antibody may occasionally become entrapped in the seal of the product vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container cap.

Tested Research Applications

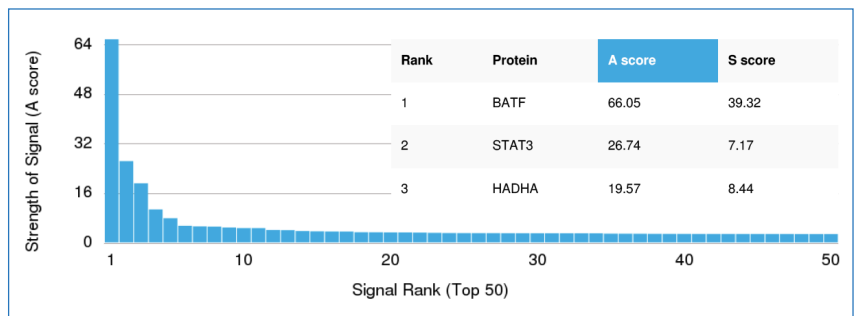
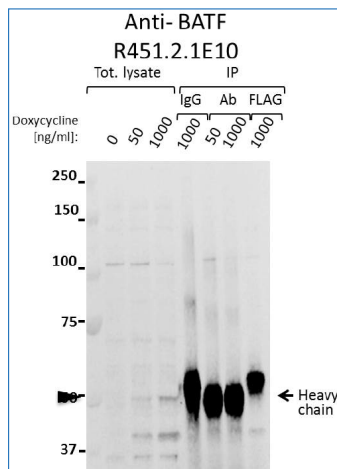
Immunoprecipitation: recommended; see below

ChIP-Seq: recommended; see page 2

Quality Assurance

IP Analysis:

Tot. lysate- Cell lysate using different concentrations of Doxycycline. IgG- Immunoprecipitation of lysate from transfected cells using normal mouse IgG control antibody (SIGMA sc-2025). Ab-Immunoprecipitation of lysate from transfected cells using mAb Anti-BATF (clone R451.2.1E10) FLAG-Immunoprecipitation of lysate from transfected cells using FLAG-M2 antibody (SIGMA F1804)
*Blotting done with rabbit anti-FLAG from Cell Signaling #2368.



Specificity Analysis with HuProt™ Human Proteome Microarray: Anti Human BATF (clone R451.2.1E10) was analyzed using the CDI HuProt™ Human Proteome Microarray.

For more information on A/S scores and how they relate to specificity, see page 2.

Anti-Human BATF, monoclonal (clone R451.2.1E10)

Recommended name: Basic leucine zipper transcriptional factor ATF-like
Alternative name(s): B-cell-activating transcription factor; Short names: B-ATF; SFA-2

Cat. No. m14-108
Lot. No. 20150728.L.I

Quantity: 100 µg
Storage: -20 °C



FOR RESEARCH USE ONLY

NOT FOR USE IN HUMANS

DATASHEET Page 2 of 2

Uniprot / NCBI Summary

Continued from page 1.

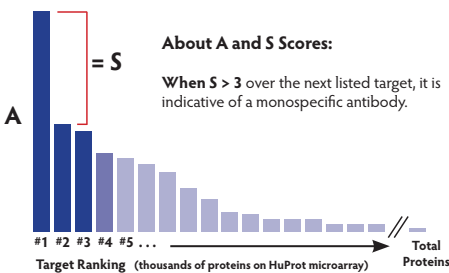
germline transcripts of the intervening heavy-chain region and constant heavy-chain region (I(H)-C(H)). Post-translational modification: Phosphorylated on serine and threonine residues and at least one tyrosine residue. Phosphorylation at Ser-43 inhibit DNA binding activity and transforms it as a negative regulator of AP-1 mediated transcription. Subunit structure: Heterodimer; mainly heterodimerizes with JUNB. Sequence similarities: Belongs to the bZIP family. Contains 1 bZIP (basic-leucine zipper) domain.

General Reference:

Dorsey MJ, Tae H-J, Sollenberger KG, Mascarenhas NT, Johansen LM, Taparowsky EJ (1994) B-ATF: a novel human bZIP protein that associates with members of the AP-1 transcription factor family. *Oncogene* **11**:2255-2265. [\[PubMed\]](#)

Echlin DR, Tae H-J, Mitin N, Taparowsky EJ (1999) B-ATF functions as a negative regulator of AP-1 mediated transcription and blocks cellular transformation by Ras and Fos. *Oncogene* **19**:1752-1763. [\[PubMed\]](#)

Quigley M, Pereyra F, Nilsson B, Porichis F, Fonseca C, Eichbaum Q, Julg B, Jesneck JL, et al. (2009) Transcriptional analysis of HIV-specific CD8+ T cells shows that PD-1 inhibits T cell function by upregulating BATF. *Nat Med* **16**:1147-1151. [\[PubMed\]](#)

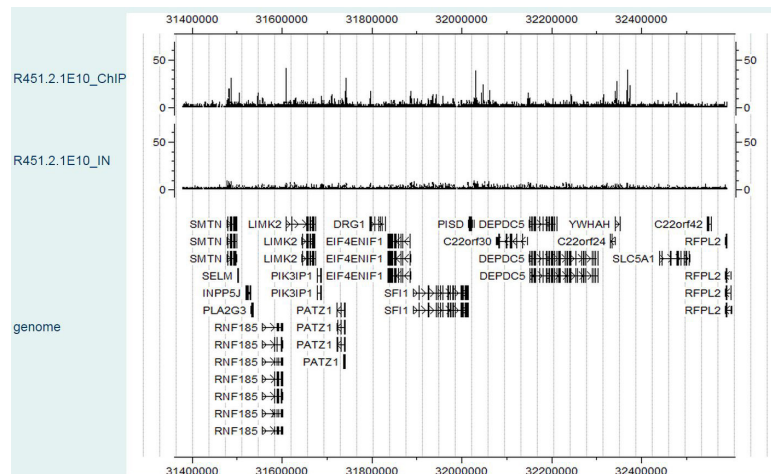
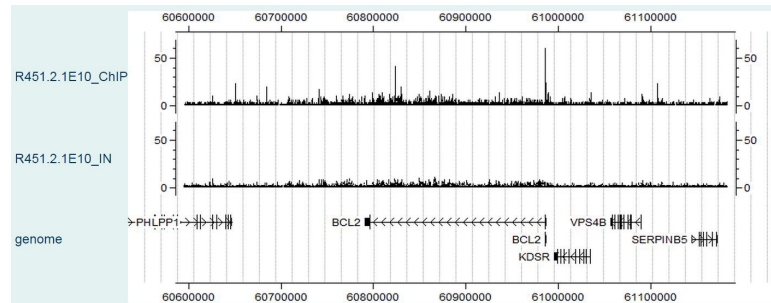
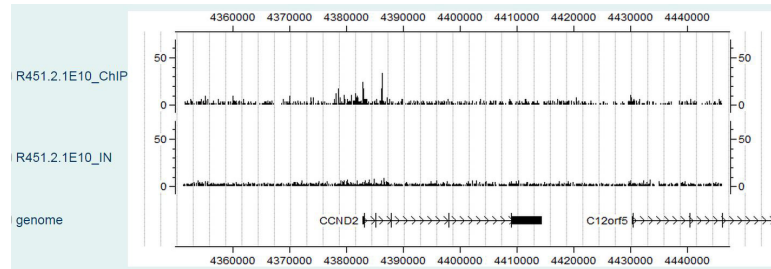


Statistical Analysis: Thousands of GenePix data points (from the microarray) are analyzed in terms of signal strength and ranked accordingly.

SUMMARY: The A-score indicates the number of standard deviations above background seen for the mean signal bound by the target antigen. The S-score represents the difference between the A-score of the target antigen and the next best hit on the array. S-scores **greater than 3 standard deviations over the next listed target** are deemed statistically significant and indicate **highly specific antibodies**. More info at cdi-lab.com/HighSpec.html

Tested Research Applications

ChIP-Seq: Recommended



ChIP was performed with chromatin from 10 million GM12878 cells and 3 µg of Anti-BATF (cloneID #R451.2.1E10) antibody. The ChIP DNA was sequenced on an Illumina HiSeq platform and read counts were calculated at consecutive 100 bp bins across the human genome hg19. Normalized read-count levels for ChIP-seq of BATF (R451.2.1E10_ChIP) and control (R451.2.1E10_IN) around the CCND2, BCL2 and a 1,200,000 bp region (chromosome 22: 31,400,000-32,600,000) are displayed in the CisGenome browser.

The development of this antibody was supported by the National Institutes of Health Protein Capture Reagent Program under award U54HG06434 to CDI Laboratories and Johns Hopkins University.