

Anti-Human KLF10, monoclonal (clone R846.1.1D3)

Recommended name: Krueppel-like factor 10

Alternative name: EGR-alpha; Transforming growth factor-beta-inducible early growth response protein 1; Short name: TIEG-1

Cat. No. m14-355
Lot. No. 20150817.L.I.K

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 # [Q13118](#)
Secondary Accession # [O75411](#); [Q503B2](#)

NCBI

GI # [73760403](#)
GeneID [7071](#)
Accession # [NP_001027453.1](#)
GenBank Nucleotide # [NM_001032282.3](#)

Molecular Weight 52,555 Da (480 aa)

Transcriptional repressor which binds to the consensus sequence 5'-GGTGTG-3'. Plays a role in the regulation of the circadian clock; binds to the GC box sequence in the promoter of the core clock component ARTNL/BMAL1 and represses its transcriptional activity. Regulates the circadian expression of genes involved in lipogenesis, gluconeogenesis, and glycolysis in the liver. Represses the expression of PCK2, a rate-limiting step enzyme of gluconeogenesis (By similarity). May play a role in the cell cycle regulation.

Subcellular location: nucleus

Continued on page 2.

Physical Characteristics

Quantity: 100 µg

Concentration: 1.0 mg/ml

Host / Isotype: mouse IgG2a

Clonality: monoclonal; ID R846.1.1D3

Immunogen: recombinant protein corresponding to aa residues 336-480 of human KLF10

Purification: affinity-chromatography using Protein G

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

Specificity: monospecific for human KLF10; 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

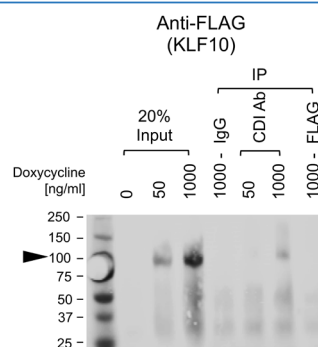
Immunoprecipitation: recommended; see below.

ChIP-Seq: recommended; see page 2

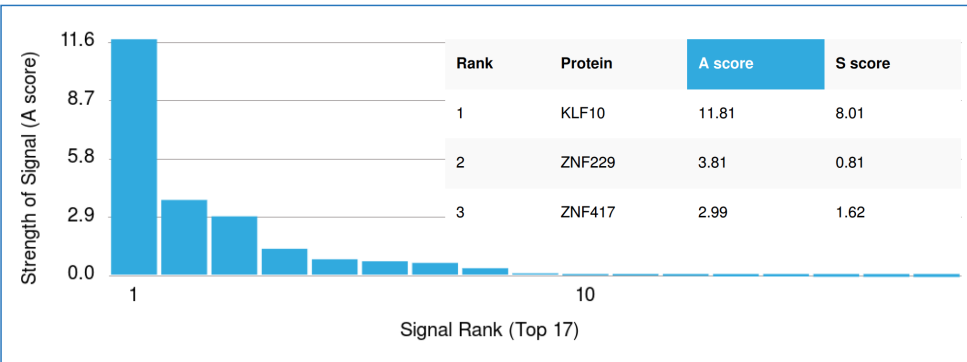
Western Blot: tested on cells transfected with a construct encoding KLF10; utility on native cells under evaluation

Octet: Recommended.

Quality Assurance



Tet-ON HeLa cells were transfected with construct encoding KLF10 (NM_001032282.1) with an N-terminal fusion of FLAG, YFP (Venus) and V5 tags, under a tet-inducible promoter. These cells were stimulated with 0, 50 or 1000 ng/ml doxycycline. Immunoprecipitation (IP) was carried out using 5 µg of either IgG, CDI mAb Anti-KLF10 (cloneID# R846.1.1D3) or 1 µg of FLAG-M2. Immunoblotting was performed using rabbit Anti-FLAG (1:1000, Cell Signaling #2368).



Specificity Analysis with HuProt™ Human Proteome Microarray: Anti Human KLF10 (clone R846.1.1D3) 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 KLF10, monoclonal (clone R846.1.1D3)

Recommended name: Krueppel-like factor 10

Alternative name: EGR-alpha; Transforming growth factor-beta-inducible early growth response protein 1; Short name: TIEG-1

Cat. No. m14-355
Lot. No. 20150817.L.I.K

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.

Selected References:

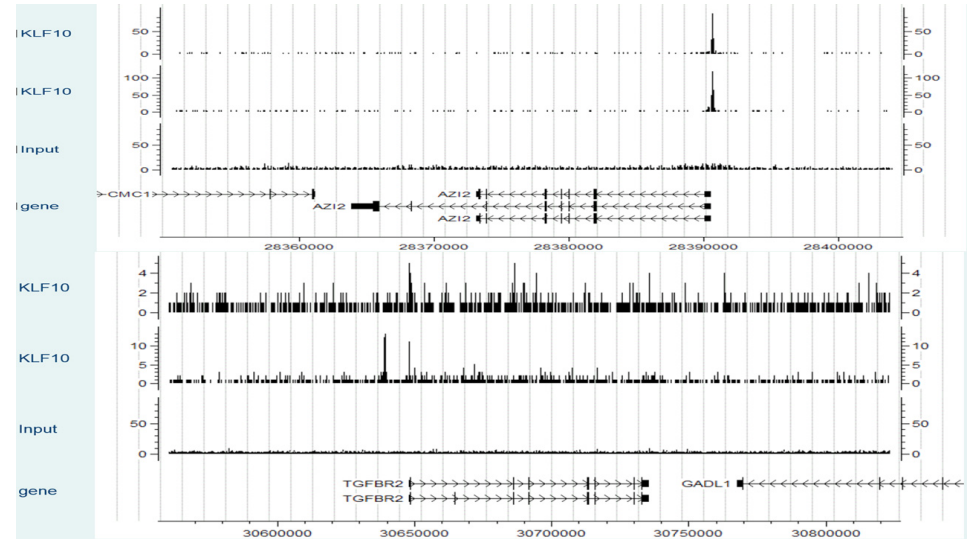
Spittau B, Kriegelstein K (2012) Klf10 and Klf11 as mediators of TGF-beta superfamily signaling. *Cell Tissue Res* **347**:65-72. [PubMed]

Subramaniam M, Hawse JR, Rajamannan NM, Ingle JN, Spelsberg TC (2010) Functional role of KLF10 in multiple disease processes. *Biofactors* **36**:8-18. [PubMed]

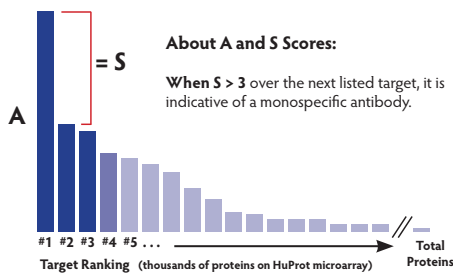
Papadakis KA, Krempski J, Svingen P, Xiong Y, Sarmiento OF, Lomberg GA, Urrutia RA, Faubion WA (2015) Krüppel-like factor KLF10 deficiency predisposes to colitis through colonic macrophage dysregulation. *Am J Physiol Gastrointest Liver Physiol* **1**;309:G900-9. [PubMed]

Tested Research Applications

ChIP-Seq: Recommended



The ChIP was performed with chromatin from 10 million MCF7 (top panel) or HepG2 (middle panel) cells and 3 µg of Anti-KLF10 (cloneID # R846.1.1D3) 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 KLF10 (R846.1.1D3) and control (Input) around the AZI2 and TGF-beta loci are displayed in the CisGenome browser.



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

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.