

Product datasheet for RC210294

SHARP2 (BHLHE40) (NM_003670) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SHARP2 (BHLHE40) (NM_003670) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SHARP2
Synonyms:	BHLHB2; Clast5; DEC1; HLHB2; SHARP-2; SHARP2; STRA13; Stra14
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210294 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGCGGATCCCCAGCGCGCAACCACCCCCGCCTGCCTGCCAAAGCACCGGGACTGGAGCACGGAG
ACCTACCAGGGATGTACCCTGCCACATGTACCAAGTGTACAAGTCAAGACGGGAATAAAGCGGAGCGA
GGACAGCAAGGAGACCTACAAATGGCCGACCGGCTCATCGAGAAAAAGAGACGTGACCGGATTAACGAG
TGCATCGCCAGCTGAAGGATCTCTACCCGAACATCTCAAACCTACAACCTTTGGGTCACTTGGAAAAAG
CAGTGGTTCTTGAACCTTACCTTGAAGCATGTGAAAGCACTAACAAACCTAATTGATCAGCAGCAGCAGAA
AATCATTGCCCTGCAGAGTGGTTTACAAGCTGGTGGAGCTGTGAGGAGAAATGTCGAAACAGGTCAAGAG
ATGTTCTGCTCAGGTTTCCAGACATGTGCCCGGGAGGTGCTTCAATATCTGGCCAAGCACGAGAACA
GGACCTGAAGTCTTCGAGCTTGTACCCACCTCCACCGGGTGGTCTCGGAGCTGCTGCAGGGTGGTAC
CTCCAGGAAGCCATCAGACCCAGCTCCCAAAGTATGAGCTTCAAGGAAAAACCCAGCTCTCCGGCCAAA
GGTTCCGAAGGTCTGGGAAAACTGCGTGCCAGTCCAGCGGACTTTCGCTCACTCGAGTGGGGAGC
AGAGCGGCAGCGACCGGACACAGACAGTGGCTATGGAGGAGAATCGGAGAAGGGCGACTTGCAGTGA
GCAGCCGTGCTTCAAAAGTGACCACGGACGCGAGTTACAGATGGGAGAAAGGATCGGCGCAATTAAGCAA
GAGTCCGAAGAACCCCCACAAAAAGAACCAGTGCAGCTTTCGGATGATGAAGGCCATTTCACTAGCA
GTGACCTGATCAGCTCCCGTTCTGGGCCACACCCACACCCAGCCTCCTTCTGCCTGCCCTTCTACCT
GATCCACCTTCAAGGACTGCCTACCTGCCATGCTGGAGAAGTGGTATCCACCTCAGTGCCAGTG
CTATACCCAGGCCTCAACGCCTCTGCCGACCCCTCTAGCTTCAATGAACCCAGACAAGATCTCGGCTC
CCTTGCTCATGCCCGAGAGACTCCCTTCTCCCTTGCCAGCTCATCCGTCGCTCGACTCTTCTGTCTGTCT
CCAAGCTCTGAAGCCAATCCCCCTTTAACTTAGAAACCAAAGAC

ACGGTACGGCGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC210294 protein sequence
Red=Cloning site Green=Tags(s)

MERIPSAQPPACLPKAPGLEHGDLPGMPAHMYQVYKSRRGIKRSSEDSKETYKLPHRLIEKKRRDRINE
 CIAQLKDLLPEHLKLTTLGHLEKAVVLELTLKHVKALTNLIDQQQKIIALQSQLQAGELSGRNVTGQE
 MFCSGFQTCAREVLQYLAKHENTRDLKSSQLVTHLHRVSELLQGGT SRKPSDPAPKVMDFKEKPPSSPAK
 GSEGPKNCPVVIQRTFAHSSGEQSGSDTDTDSGYGGESEKGLRSEQPCFKSDHGRFFTMGERIGAIIKQ
 ESEEPPTKKNRMQLSDDEGHFTSSDLISSPFLGPHPHQPPFCLPFYLIPPSATAYLPMLEKWCWYPTSVPV
 LYPGLNASAAALSSFMPNDKISAPLLMPQRLPSPLPAHPSVDSSVLLQALKPIPLNLETKD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6271_b06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_003670

ORF Size: 1236 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_003670.3](#)

RefSeq Size: 3061 bp

RefSeq ORF: 1239 bp

Locus ID: 8553

UniProt ID: [O14503](#)

Cytogenetics: 3p26.1

Domains: HLH, ORANGE

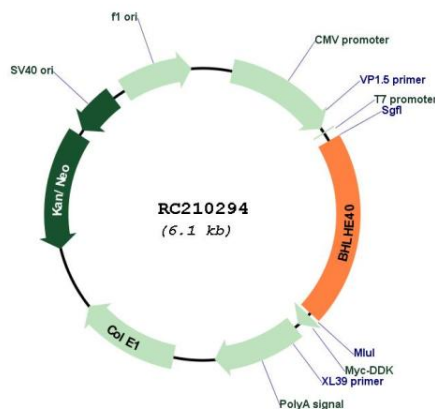
Protein Families: Transcription Factors

Protein Pathways: Circadian rhythm - mammal

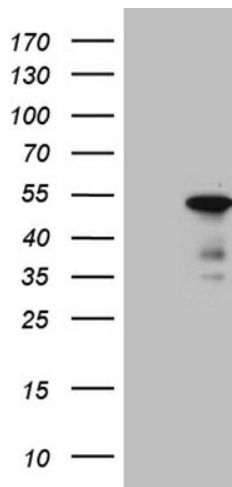
MW: 45.5 kDa

Gene Summary: This gene encodes a basic helix-loop-helix protein expressed in various tissues. The encoded protein can interact with ARNTL or compete for E-box binding sites in the promoter of PER1 and repress CLOCK/ARNTL's transactivation of PER1. This gene is believed to be involved in the control of circadian rhythm and cell differentiation. [provided by RefSeq, Feb 2014]

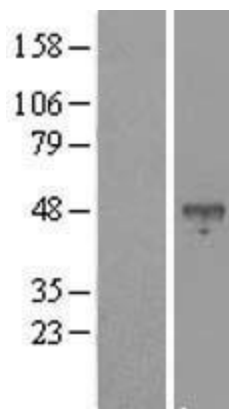
Product images:



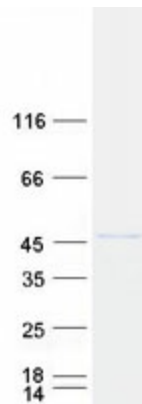
Circular map for RC210294



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY BHLHE40 (Cat# RC210294, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-BHLHE40 (Cat# [TA810228])(1:2000). Positive lysates [LY418509] (100ug) and [LC418509] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY418509]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210294 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified BHLHE40 protein (Cat# [TP310294]). The protein was produced from HEK293T cells transfected with BHLHE40 cDNA clone (Cat# RC210294) using MegaTran 2.0 (Cat# [TT210002]).