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Product datasheet for RC208209

OLIG2 (NM_005806) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	OLIG2
Synonyms:	BHLHB1; bHLHe19; OLIGO2; PRKCBP2; RACK17
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC208209 representing NM_005806. Blue=ORF Red=Cloning site Green=Tag(s)

GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGACTCGGACGCCAGCCTGGTGTCCAGCCGCCCGTCGTCGCCAGAGCCCGATGACCTTTTTCTGCCG
GCCCGGAGTAAGGGCAGCAGCGGCAGCGCCTTCACTGGGGGCACCGTGTCCTCGTCCACCCCGAGTGAC
TGCCCGCCGGAGCTGAGCGCCGAGCTGCGCGGCGCTATGGGCTCTGCGGGCGCGCATCCTGGGGACAAG
CTAGGAGGCAGTGGCTTCAAGTCGTCCTCGTCCAGCACCTCGTCGTCTACGTCGTCGGCGGCTGCGTCG
TCCACCAAGAAGGACAAGAAGCAAATGACAGAGCCGGAGCTGCAGCAGCTGCGTCTCAAGATCAACAGC
CGCGAGCGCAAGCGCATGCACGACCTCAACATCGCCATGGATGGCCTCCGCGAGGTCATGCCGTACGCA
CACGGCCCTTCGGTGCGCAAGCTTTCCAAGATCGCCACGCTGCTGCTGGCGCGCAACTACATCCTCATG
CTCACCAACTCGCTGGAGGAGATGAAGCGACTGGTGAGCGAGATCTACGGGGGCCACCACGCTGGCTTC
CACCCGTCGGCCTGCGGCGGCCTGGCGCACTCCGCGCCCCTGCCCGCCGCCACCGCGCACCCGGCAGCA
GCAGCGCACGCCGCACATCACCCCGCGGTGCACCACCCCATCCTGCCGCCCGCCGCCGCAGCGGCTGCT
GCCGCCGCTGCAGCCGCGGCTGTGTCCAGCGCCTCTCTGCCCGGATCCGGGCTGCCGTCGGTCGGCTCC
ATCCGTCCACCGCACGGCCTACTCAAGTCTCCGTCTGCTGCCGCGGCCGCCCCGCTGGGGGGCGGGGGC
GGCGGCAGTGGGGCGAGCGGGGGCTTCCAGCACTGGGGCGGCATGCCCTGCCCCTGCAGCATGTGCCAG
GTGCCGCCGCCGCACCACCACGTGTCGGCTATGGGCGCCGGCAGCCTGCCGCGCCTCACCTCCGACGCC
AAG
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC

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Protein Sequence:

>Peptide sequence encoded by RC208209
Blue=ORF Red=Cloning site Green=Tag(s)

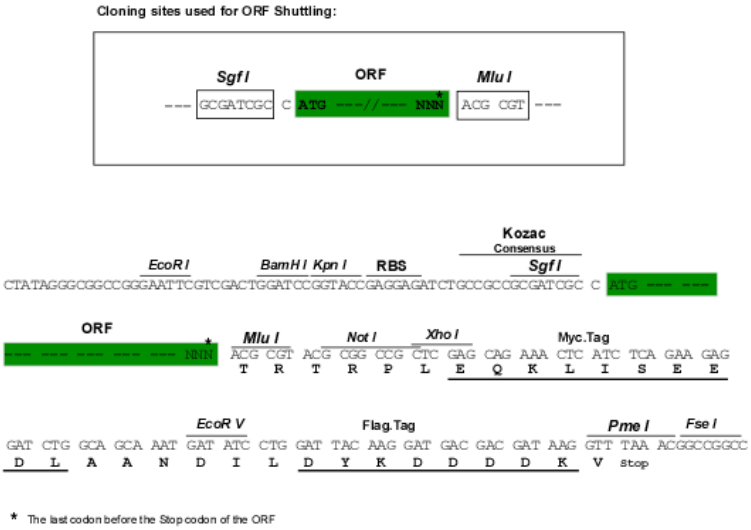
MDSDASLVSSRPSSPEPDDLFLPARSKGSSGSAFTGGTVSSSTPSDCPPELSAELRGAMGSAGAHPGDK
LGGSGFKSSSSSTSSSTSSAAASSTKKDKKQMTEPELQQLRLKINSRERKRMHDLNIAMDGLREVMPYA
HGPSVRKLSKIATLLLARNYILMLTNSLEEMKRLVSEIYGGHHAGFHPSACGGLAHSAPLPAATAHPAA
AAHAAHHPAVHHPILPPAAAAAAAAAAAAAAVSSASLPGSGLPSVGSIRPPHGLLKSPSAAAAAPLGGGG
GGSGASGGFQHWGGMPCPCSMCQVPPPHHHVSAMGAGSLPRLTSDAK
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Recombinant protein using RC208209 also available, TP308209

Chromatograms: https://cdn.origene.com/chromatograms/mg3701_f09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005806

ORF Size: 969 bp

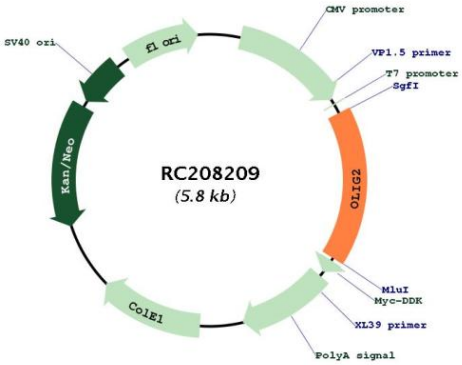
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

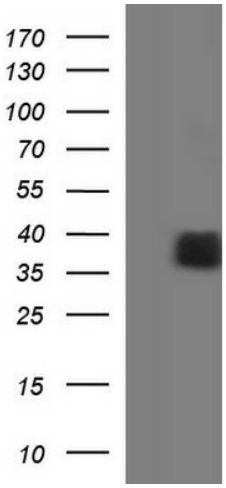
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_005806.1, NP_005797.1
RefSeq Size:	2505 bp
RefSeq ORF:	972 bp
Locus ID:	10215
UniProt ID:	Q13516
Cytogenetics:	21q22.11
Domains:	HLH
Protein Families:	Druggable Genome, Transcription Factors
MW:	32.4 kDa
Gene Summary:	This gene encodes a basic helix-loop-helix transcription factor which is expressed in oligodendroglial tumors of the brain. The protein is an essential regulator of ventral neuroectodermal progenitor cell fate. The gene is involved in a chromosomal translocation t(14;21)(q11.2;q22) associated with T-cell acute lymphoblastic leukemia. Its chromosomal location is within a region of chromosome 21 which has been suggested to play a role in learning deficits associated with Down syndrome. [provided by RefSeq, Jul 2008]

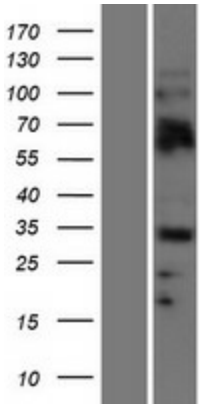
Product images:



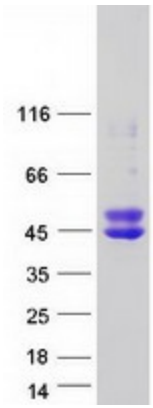
Circular map for RC208209



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY OLIG2 (Cat# RC208209, 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-OLIG2 (Cat# [TA590593]). Positive lysates [LY417055] (100ug) and [LC417055] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY417055]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208209 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified OLIG2 protein (Cat# [TP308209]). The protein was produced from HEK293T cells transfected with OLIG2 cDNA clone (Cat# RC208209) using MegaTran 2.0 (Cat# [TT210002]).