

Product datasheet for **RC226214**

LRRC8D (NM_001134479) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LRRC8D (NM_001134479) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	LRRC8D
Synonyms:	LRRC5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC226214 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTTACCCTTGCGGAAGTTGCATCACTTAATGACATTCAGCCAACCTACCGAATCCTGAAACCATGGT
 GGGATGTGTTTATGGATTACCTAGCTGTTGTTATGTTAATGGTAGCCATCTTTCAGGAACCATGCAACT
 TACCAAAGATCAGGTGGTCTGTTTGCCAGTATTGCCATCTCCTGTAAATCAAAGGCACATACACCACCA
 GGAATGCGGAGGTCACCACCAACATCCCAAAGATGGAAGCAGCCACCAACCAAGACCAAGATGGGCGGA
 CAACAAACGACATTTCTTTGGGACATCTGCTGTGACACCTGACATACCTCTCAGAGCCACATATCTCG
 CACAGATTTGCACTTCCAAATCAGGAGGCAAAGAAAGAGAAGAAAGATCCAACAGGTCGAAAAACAAAC
 TTGGATTTTCAGCAATATGTATTTAATCAAATGTGTACCATCTGGCCCTCCGTGGTATTCTAAGT
 ACTTTCCATACCTAGCTCTTATACATACTATTATCTCATGGTCAGTAGCAACTTTTGGTCAAATATCC
 CAAAACATGCTCAAAGTAGAACATTTTGTTCATATTAGGAAAGTGCTTTGAATCCCCTTGGACGACA
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 GGAGAGCAGGCCAAAGCCCTGTTGAGAAAAGTGAGGAAGTCCGTGCCATGTGGAAGATAGTGACTTGA
 TCTATAAACTCTATGTGGTCCAAACAGTTATCAAACAGCCAAGTTCATTTTTATTCTCTGCTATACAGC
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 GTATTTGAGTGCACCCACAATATGGCTTACATGTTGAAAAGCTTCTCATCAGTTACATATCCATTATTT
 GTGTTTATGGCTTATCTGCCTCTACACTCTCTCTGTTATTTCAGGATACCTTTGAAGGAATATCTTTT
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 CACATGGTAGACCAGTATGACCAGCTATATTCCAAGCGTTTTGGTGTGTTCTTGCAGAAGTTAGTGAAA
 AATAAACTAGGGAAATTAGTTTGAACCATGAGTGGACATTTGAAAACTCAGGCAGCACATTTACAGCAA
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 GACCTGGATGTGCTAAAGCTTGAACATAATCCAGAAGCTAAAATTCCTGCTAAGATTTCTCAAATGACTA
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 TCACTTGAGATGCCTTACGTGAAGTTCAGTGTGGCTGAAATTCCTGCCTGGGTGATTTGCTCAA
 AACCTTCGAGAGTTGACTTAATAGGCAATTTGAACTCTGAAAACAATAAGATGATAGGACTTGAATCTC
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 AGATGTGGCTCCACATCTTACAAAGTTAGTCATTACATAATGACGGCACTAAACTCTTGGTACTGAACAGC
 CTTAAGAAAATGATGAATGTGCTGAGCTGGAACCTCCAGAAGTGTGAGCTAGAGAGAATCCACATGCTA
 TTTTCAGCCTCTTAATTTACAGGAACTGGATTTAAAGTCCAATAACATTCGCACAATTGAGGAAATCAT
 CAGTTTCCAGCATTTAAAACGACTGACTTGTAAAATATGGCATAACAAAATTTGTTACTATTCCTCCC
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 CAGTATTTAGTTTACAGAACTCAGATGCTTAGATGTGAGCTACAACAACATTTCAATGATTCGAATAGA
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 TTGTTTAAATGCATAAAGTTGAGGACTTTGAATCTGGGACAGAAGTGCATCACCTACTCCAGAGAAAG
 TTGGTCAGCTCTCCAGCTCACTCAGCTGGAGCTGAAGGGGAAGTCTTGGACCGCTGCCAGCCAGCT
 GGGCCAGTGTGCGATGCTCAAGAAAAGCGGGCTTGTGTGGAAGATCACCTTTTTGATACCTGCCACTC
 GAAGTCAAAGAGGCATTGAATCAAGACATAAATATTCCTTTGCAAAATGGGATT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC226214 protein sequence
Red=Cloning site Green=Tags(s)

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MFTLAEVASLNDIQPTYRILKPWWDFVMDYLAVVMLMVAIFAGTMQLTKDQVVCLPVLPSVNSKAHTPP
GNAEVTTNIPKMEAATNQDQDGRITNDISFGTSAVTPDIPLRATYPRDFALPNQEAKKEKDPGRKTN
LDFQYYVFINQMCYHLALPWYSKYFPYLALIHITILMVSSNFWFKYPKTCSKVEHFVSILGKCFESPWTT
KALSETACEDSEENKQRITGAQTLPKHVSTSSDEGSPSASTPMINKTGFKFSAEKPVIEVPSMTILDKKD
GEQAKALFEKVRKFRAHVEDSDLIYKLYVQTVIKTAKFIFILCYTANFVNAISFEHVCKPKVEHLIGYE
VFECTHNMAYMLKLLISYISIIICVYGFICLYTLFWLFRIPLKEYSFEKVVREESSFSDIPDVKNDFALL
HMVDQYDQLYSKRFGVFLSEVSENKLEISLNHEWTFEKLQHISRNAQDKQELHLFMLSGVPDAVFDLT
DLVDLKLLEIPEAKIPAKISQMTNLQELHLCHCPAKVEQTAFSFLRDHLRCLHVKFTDVAEIPAWVYLLK
NLRELYLIGNLSENKMIIGLESLRELRLKILHVKSNTKVPSNITDVAPHLTKLVIHNDGKLLVLNS
LKKMMNVAEELQNCERIPHAIFSLSNLQELDLKSNNIRTIEEIIISFQHLKRLTCLKLWHNKIVTIPP
SITHVKNLESLEYFSNNKLESLPVAVFLQKLRCLDVSYNNISMIPTEIGLLQNLQHLHITGNKVDILPKQ
LFKCIKLRRLNLGQCITSLPEKVGQLSQTQLELKGNCLEDRPAQLGQCRMLKKSGLVVEDHLFDLPL
EVKEALNQDINIPFANGI
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6690_f05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

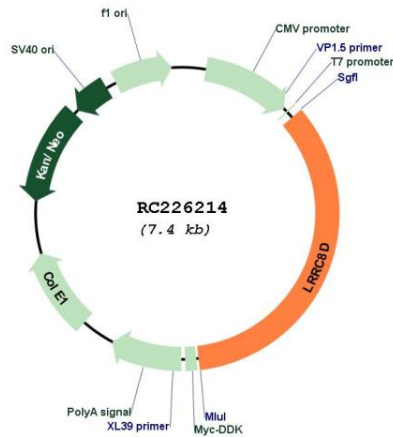


* The last codon before the Stop codon of the ORF

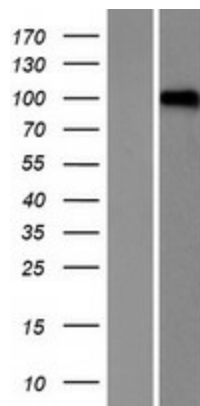
ACCN:	NM_001134479
ORF Size:	2574 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its 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:	<ol style="list-style-type: none">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_001134479.2
RefSeq Size:	3795 bp
RefSeq ORF:	2577 bp
Locus ID:	55144
UniProt ID:	Q7L1W4
Cytogenetics:	1p22.2
Protein Families:	Transmembrane
MW:	98.2 kDa

Gene Summary:

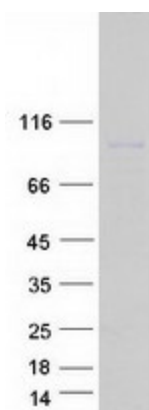
Non-essential component of the volume-regulated anion channel (VRAC, also named VSOAC channel), an anion channel required to maintain a constant cell volume in response to extracellular or intracellular osmotic changes (PubMed:24790029, PubMed:26530471, PubMed:26824658, PubMed:28193731). The VRAC channel conducts iodide better than chloride and can also conduct organic osmolytes like taurine (PubMed:24790029, PubMed:26824658, PubMed:28193731). Plays a redundant role in the efflux of amino acids, such as aspartate, in response to osmotic stress (PubMed:28193731). Channel activity requires LRRC8A plus at least one other family member (LRRC8B, LRRC8C, LRRC8D or LRRC8E); channel characteristics depend on the precise subunit composition (PubMed:24782309, PubMed:24790029, PubMed:26824658, PubMed:28193731). LRRC8A and LRRC8D are required for the uptake of the drug cisplatin (PubMed:26530471). Mediates the import of the antibiotic blasticidin-S into the cell (PubMed:24782309).[UniProtKB/Swiss-Prot Function]

Product images:


Circular map for RC226214



Western blot validation of overexpression lysate (Cat# [LY427455]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC226214 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified LRRC8D protein (Cat# [TP326214]). The protein was produced from HEK293T cells transfected with LRRC8D cDNA clone (Cat# RC226214) using MegaTran 2.0 (Cat# [TT210002]).