

Product datasheet for **RC203641**

LRRC8D (NM_018103) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LRRC8D (NM_018103) 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:**

>RC203641 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTTTACCCTTGCGGAAGTTGCATCACTTAATGACATTCAGCCAACCTACCGAATCCTGAAACCATGGT
 GGGATGTGTTTATGGATTACCTAGCTGTTGTTATGTTAATGGTAGCCATCTTTGCAGGAACCATGCAACT
 TACCAAAGATCAGGTGGTCTGTTTGCCAGTATTGCCATCTCCTGTAAATCAAAGGCACATACACCACCA
 GGAATGCCGAGGTCACCACCAACATCCCAAAGATGGAAGCAGCCACCAACCAAGACCAAGATGGGCGGA
 CAACAAACGACATTTCTTTGGGACATCTGCTGTGACACCTGACATACCTCTCAGAGCCACATATCTCG
 CACAGATTTGCACTTCCAAATCAGGAGGCAAAGAAAGAGAAGAAAGATCCAACAGGTCGAAAAACAAAC
 TTGGATTTTCAGCAATATGTATTTAATCAAATGTGTACCATCTGGCCCTCCGTGGTATTCTAAGT
 ACTTTCCATACCTAGCTCTTATACATACTATTATCTCATGGTCAGTAGCAACTTTTGGTCAAATATCC
 CAAAACATGCTCAAAGTAGAACATTTTGTTCATATTAGGAAAGTGCTTTGAATCCCCTTGAGCAGACA
 AAAGCGTTGTCTGAGACAGCATGCGAAGACTCAGAGGAAAACAAGCAGAGAATAACAGGTGCCAGACTC
 TACCAAAGCATGTTTCTACCAGCAGTGATGAAGGGAGCCCAAGTCCAGTACACCAATGATCAATAAAAC
 TGGCTTTAAATTTTACGCTGAGAAGCCTGTGATTGAAGTCCCAGCATGACAATCCTGGATAAAAAGGAT
 GGAGAGCAGGCCAAAGCCCTGTTGAGAAAAGTGAGGAAGTCCGTGCCATGTGGAAGATAGTGACTTGA
 TCTATAAACTCTATGTGGTCCAAACAGTTATCAAACAGCCAAGTTCATTTTTATTCTCTGCTATACAGC
 GAACCTTTGTCAACGCAATCAGCTTTGAACACGTCTGCAAGCCCAAAGTTGAGCATCTGATTGGTTATGAG
 GTATTTGAGTGCACCCACAATATGGCTTACATGTTGAAAAGCTTCTCATCAGTTACATATCCATTATTT
 GTGTTTATGGCTTTATCGCCTCTACACTCTCTCTGTTATTTCAGGATACCTTTGAAGGAATATCTTTT
 CGAAAAAGTCAGAGAAGAGAGCAGTTTTAGTGACATTCCAGATGTCAAAAACGATTTTGGCTTCTCTT
 CACATGGTAGACCAGTATGACCAGCTATATTCCAAGCGTTTTGGTGTGTTCTTGTCAGAAGTTAGTGAAA
 AATAAACTAGGGAAATTAGTTTGAACCATGAGTGGACATTTGAAAACTCAGGCAGCACATTTACAGCAA
 CGCCCAGGACAAGCAGGAGTTGCATCTGTTTATGCTGTGCGGGGTGCCGATGCTGTCTTTGACCTCACA
 GACCTGGATGTGCTAAAGCTTGAACATAATCCAGAAGCTAAAATTCCTGCTAAGATTTCTCAAATGACTA
 ACCTCAAAGAGCTCCACCTCTGCCACTGCCCTGCAAAAGTTGAACAGACTGCTTTTAGCTTTCTTCGCGA
 TCACTTGAGATGCCTTACGTGAAGTTCAGTGTGGCTGAAATTCCTGCCTGGGTGATTTGCTCAA
 AACCTTCGAGAGTTGACTTAATAGGCAATTTGAACTCTGAAAACAATAAGATGATAGGACTTGAATCTC
 TCCGAGAGTTGCGGCACCTTAAGATTCTCCACGTGAAGAGCAATTTGACCAAAGTTCCCTCCAACATTAC
 AGATGTGGCTCCACATCTTACAAAGTTAGTCATTACATAATGACGGCACTAAACTCTTGGTACTGAACAGC
 CTTAAGAAAATGATGAATGTCGCTGAGCTGGAACCTCCAGAAGTGTGAGCTAGAGAGAATCCACATGCTA
 TTTTCAGCCTCTTAATTTACAGGAACTGGATTTAAAGTCCAATAACATTCGCACAATTGAGGAAATCAT
 CAGTTTCCAGCATTTAAAACGACTGACTTGTTAAAATATGGCATAACAAAATTTGTTACTATTCCTCCC
 TCTATTACCCATGTCAAAAACCTGGAGTCACTTTATTTCTTACAACAAGCTCGAATCCTTACCAGTGG
 CAGTATTTAGTTTACAGAACTCAGATGCTTAGATGTGAGCTACAACAACATTTCAATGATTCGAATAGA
 AATAGGATTTGCTTCAGAACCTGCAGATTTGCATATCACTGGGAACAAAGTGGACATTTGCCAAAACAA
 TTGTTTAAATGCATAAAGTTGAGGACTTTGAATCTGGGACAGAAGTGCATCACCTACTCCAGAGAAAG
 TTGGTCAGCTCTCCAGCTCACTCAGCTGGAGCTGAAGGGGAACTGCTTGACCGCCTGCCAGCCAGCT
 GGGCCAGTGTGCGATGCTCAAGAAAAGCGGGCTTGTGTGGAAGATCACCTTTTTGATACCTGCCACTC
 GAAGTCAAAGAGGCATTGAATCAAGACATAAATATTCCTTTGCAAAATGGGATT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC203641 protein sequence
 Red=Cloning site Green=Tags(s)

MFTLAEVASLNDIQPTYRILKPWWDFVMDYLAVVMLMVAIFAGTMQLTKDQVVCLPVLPSVNSKAHTPP
 GNAEVTNIPKMEAATNQDQDGRITNDISFGTSAVTPDIPLRATYPRDFALPNQEAKKEKDPTRKTN
 LDFQYYVINQMCYHLALPWYSKYFPYLALIHITILMVSSNFWFKYPKTCSKVEHFVSILGKCFESPWTT
 KALSETACEDSEENKQRITGAQTLPKHVSTSSDEGSPSASTPMINKTGFKFSAEKPVIEVPSMTILDKKD
 GEQAKALFEKVRKFRAHVEDSDLIYKLYVQTVIKTAKFIFILCYTANFVNAISFEHVCKPKVEHLIGYE
 VFECTHNMAYMLKLLISYISIIICVYGFICLYTLFWLFRIPLKEYSFEKVVREESSFSDIPDVKNDFALL
 HMDVQYDQLYSKRFVFLSEVSENKLEISLNHEWTFEKLQHISRNAQDKQELHLFMLSGVDPDAVFDLT
 DLDVLELLEIPEAKIPAKISQMTNLQELHLCHCPAKVEQTAFFLRDHLRCLHVKFTDVAEIPAWVYLLK
 NLRELYLIGNLSENKMIIGLESRLRHLKILHVKSNTKVPSNITDVAPHLTKLVIHNDGKLLVLNS
 LKMMNVAELELQNCERIPHAIFSLSNLQELDLKSNIRTIEEIIISFQHLKRLTCLKLWHNKIVTIPP
 SITHVKNLESLEYFNNKLESLPVAVFLQKLRCLDVSNNISMIPTEIGLLQNLQHLHITGNKVDILPKQ
 LFKCIKLRNLNLGQCITSLPEKVGQLSQTQLELKGNCLEDRPAQLGQCRMLKKSGLVVEDHLDLPL
 EVKEALNQDINIPFANGI

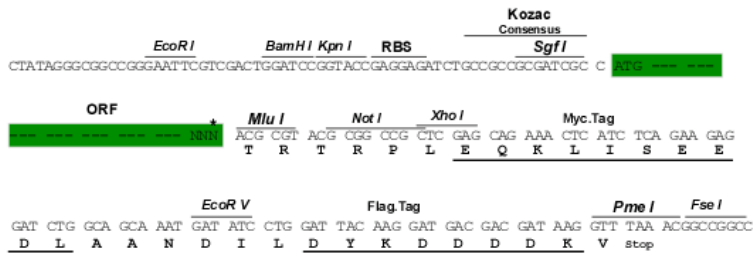
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

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

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

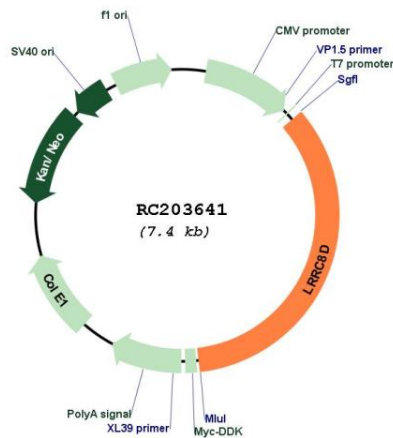


* The last codon before the Stop codon of the ORF

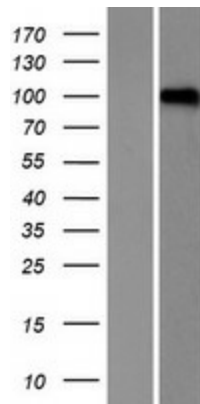
ACCN:	NM_018103
ORF Size:	2574 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_018103.5
RefSeq Size:	3782 bp
RefSeq ORF:	2577 bp
Locus ID:	55144
UniProt ID:	Q7L1W4
Cytogenetics:	1p22.2
Domains:	LRR, LRR_TYP, LRR_BAC
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 RC203641



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]).