

Product datasheet for **MR214022L4V**

3110043O21Rik (NM_001081343) Mouse Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	3110043O21Rik (NM_001081343) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	3110043O21Rik
Synonyms:	A1840585; C9orf72
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
Tag:	mGFP
ACCN:	NM_001081343
ORF Size:	1443 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR214022).
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.
RefSeq:	NM_001081343.1
RefSeq Size:	3198 bp
RefSeq ORF:	1446 bp
Locus ID:	73205
UniProt ID:	Q6DFW0
Cytogenetics:	4 A5



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Gene Summary:

Component of the C9orf72-SMCR8 complex, a complex that has guanine nucleotide exchange factor (GEF) activity and regulates autophagy (PubMed:27193190, PubMed:27617292). In the complex, C9orf72 and SMCR8 probably constitute the catalytic subunits that promote the exchange of GDP to GTP, converting inactive GDP-bound RAB8A and RAB39B into their active GTP-bound form, thereby promoting autophagosome maturation (By similarity). The C9orf72-SMCR8 complex also acts as a regulator of autophagy initiation by interacting with the ATG1/ULK1 kinase complex and modulating its protein kinase activity (PubMed:27193190, PubMed:27617292). Positively regulates initiation of autophagy by regulating the RAB1A-dependent trafficking of the ATG1/ULK1 kinase complex to the phagophore which leads to autophagosome formation (By similarity). Acts as a regulator of mTORC1 signaling by promoting phosphorylation of mTORC1 substrates (PubMed:27875531). Plays a role in endosomal trafficking (PubMed:26989253). May be involved in regulating the maturation of phagosomes to lysosomes (PubMed:26989253). Regulates actin dynamics in motor neurons by inhibiting the GTP-binding activity of ARF6, leading to ARF6 inactivation (PubMed:27723745). This reduces the activity of the LIMK1 and LIMK2 kinases which are responsible for phosphorylation and inactivation of cofilin, leading to cofilin activation (PubMed:27723745). Positively regulates axon extension and axon growth cone size in spinal motor neurons (PubMed:27723745). Plays a role within the hematopoietic system in restricting inflammation and the development of autoimmunity (PubMed:27412785).[UniProtKB/Swiss-Prot Function]