

Product datasheet for **MG211000**

Itch (NM_008395) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Itch (NM_008395) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Itch
Synonyms:	6720481N21Rik; 8030492O04Rik; A130065M08; AIP4; C230047C07Rik
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG211000 representing NM_008395
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGACAGTGGACCACAGCTTGATTCCATGGGTAGTCTGACCATGAAATCTCAACTCAGATCACTG
 TCATCTCAGCCAACTTAAAGAAAATAAAAAGAATTGGTTTGGACCAAGTCCTTATGTAGAAGTCACAGT
 AGATGGACAGTCAAAGAAGACAGAAAAATGCAATAATACAAACAGTCCCAAGTGGAAAGCAGCCCTCACA
 GTTATTGTTACCCTACGAGTAAATTATGTTTTCGTGTGTGGAGTACCAGACCTGAAGTCTGATGTTT
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 TATGACTTTGCAGCTTGTAGGTGACAAAGACCAACAGAGACGATGGGAGATTTGCAGTTTGTCTTGAT
 GGGCTGCAAGTAGAAGCTGAGGTGTTACTAACGGTGAACGTCATGCTCCGAGAGTACTACACAGAATG
 ATGATGGCTGCAGAACAGAGATGATACAAGAGTGAGCACAATGGATCAGAGGACCTGAGGTTGCAGC
 GTCAGGGGAAAACAAGAGGGCCAATGGGAACAATTCTCCGTCCCTTTCAAATGGTGGTTTTAAGCCTTCT
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 GCGTGTGGACAATATGGGACGTATTTATGTTGATCATTTACAAGAACCACAACATGGCAGAGGCCA
 ACCTTGGAACTGTCCGGAACATGAACAGTGGCAGCTACAGCGTAGTCAGCTTCAGGAGCAATTCGACG
 AGTTAACCAGAGATTCATCTATGGGAATCAAGATTTGTTTGTACATCACAAAACAAGAATTTGATCC
 GCTTGGTCCGTTGCCCTGGATGGGAGAAGAGAAGTACTGATAGCAACGGCAGAGTATTTTGTCAACCAC
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 GCTGGGAAATGAGATTACAGTGGATGGAATCCATATTTTGGGACCACAATAGAAGAGCAACTACTTA
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 CAAGAAAAACATTGTTTGGAGTTCCTTTCAGCAGATCATGAGCTTCAGCCCGAAGACCTGAGAAGACG
 TTTGTGGGTGATTTCCAGGAGAAGAAGTTTAGATTATGGAGGTGTAGCAAGAGAATGGTTCTTTCTT
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 TACAAGAGCTATGAGCAACTGAAGGAAAAGCTGTTATTTGCCATTGAAGAACTGAAGGATTTGGACAAG
 AG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >MG211000 representing NM_008395
 Red=Cloning site Green=Tags(s)

MSDSGPQLDSMGSLTMKSQLQITVISAKLKENKKNWFGPSYVEVTVDGQSKKTEKCNNTNSPKWKQPLT
 VIVTPTSKLCFRVWSHQTLKSDVLLGTAGLDIYETLKSNNMKLEEVVMTLQLVGDKEPTETMGDLSVCLD
 GLQVEAEVVTNGETSCSESTTQNDGCRTRDDTRVSTNGSEDPEVAASGENKRANGNNSPSLSNGGFKPS
 RPPRPSRPPPTPRRPASVNGSPSTNSDSDGSSTGSLPPTNTNVNTSTSEGATSGLIIPLTISGGSGPRP
 LNTVSQLAPLPPGWEQRVDQHGRVYVVDHVEKRITWDRPEPLPPGWERRVDNMGRITYVDHFTRTTTQWRP
 TLESVRNYEQWQLQRSQLQGAMQQFNQRFIYGNQDLFATSQNKEFDPLGPLPPGWEKRTDSNGRVYFVNH
 NTRITQWEDPRSQQQLNEKPLPEGWEMRFTVDGIPYFVDHNRRATTYIDPRTGKSALDNGPQIAYVRDFK
 AKVQYFRFWCQQLAMPQHIIKIVTRKTLFEDSFQQIMSFSPQDLRRLWVIFPGEEGLDYGGVAREWFFL
 LSHEVLNPMYCLFEYAGKDNVCLQINPASYINPDHLKYFRFIGRFIAMALFHGKFIDTGFSLPFYKRILN
 KPVGKLDLESIDPEFYNSLIWVKENNIEECGLEMYFSVDKEILGEIKSHDLKPNGGNILVTEENKEEYIR
 MVAEWRLSRGVEEQTAFFEGFNEILPQQYLQYFDAKELEVLLCGMQEIDLNDWQRHAIYRHYTRTSKQI
 MWFVQFVKEIDNEKRMRLQLQVGTGCRPLVGGFADLMGSSNGPQKFCIEKVGKENWLP RSHTCFNRLLDLP
 YKSYEQLKEKLLFAIEETEGFGQE

TRTRPLE - GFP Tag - V

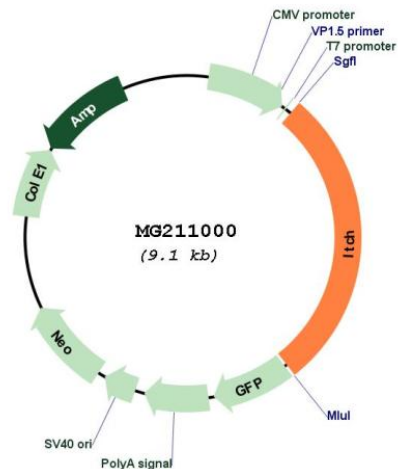
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_008395

ORF Size: 2592 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_008395.3](#)

RefSeq Size: 5214 bp

RefSeq ORF: 2595 bp

Locus ID: 16396

UniProt ID: [Q8C863](#)

Cytogenetics: 2 76.94 cM

Gene Summary: Acts as an E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates (PubMed:15358865, PubMed:16446428, PubMed:17592138, PubMed:18628966, PubMed:20392206, PubMed:25632008). It catalyzes 'Lys-29-', 'Lys-48'- and 'Lys-63'-linked ubiquitin conjugation (By similarity). Involved in the control of inflammatory signaling pathways (By similarity). Is an essential component of a ubiquitin-editing protein complex, comprising also TNFAIP3, TAX1BP1 and RNF11, that ensures the transient nature of inflammatory signaling pathways (By similarity). Promotes the association of the complex after TNF stimulation (By similarity). Once the complex is formed, TNFAIP3 deubiquitinates 'Lys-63' polyubiquitin chains on RIPK1 and catalyzes the formation of 'Lys-48'-polyubiquitin chains (By similarity). This leads to RIPK1 proteasomal degradation and consequently termination of the TNF- or LPS-mediated activation of NFKB1 (By similarity). Ubiquitinates RIPK2 by 'Lys-63'-linked conjugation and influences NOD2-dependent signal transduction pathways (By similarity). Regulates the transcriptional activity of several transcription factors involved in immune response (PubMed:15358865, PubMed:11828324). Ubiquitinates NFE2 by 'Lys-63' linkages and is implicated in the control of the development of hematopoietic lineages (By similarity). Mediates JUN ubiquitination and degradation (PubMed:15358865). Mediates JUNB ubiquitination and degradation (PubMed:11828324, PubMed:15358865). Critical regulator of type 2 helper T (Th2) cell cytokine production by inducing JUNB ubiquitination and degradation (PubMed:11828324). Involved in the negative regulation of MAVS-dependent cellular antiviral responses (By similarity). Ubiquitinates MAVS through 'Lys-48'-linked conjugation resulting in MAVS proteasomal degradation (By similarity). Following ligand stimulation, regulates sorting of Wnt receptor FZD4 to the degradative endocytic pathway probably by modulating PI42KA activity (By similarity). Ubiquitinates PI4K2A and negatively regulates its catalytic activity (By similarity). Ubiquitinates chemokine receptor CXCR4 and regulates sorting of CXCR4 to the degradative endocytic pathway following ligand stimulation by ubiquitinating endosomal sorting complex required for transport ESCRT-0 components HGS and STAM (By similarity). Targets DTX1 for lysosomal degradation and controls NOTCH1 degradation, in the absence of ligand, through 'Lys-29'-linked polyubiquitination (PubMed:18628966). Ubiquitinates SNX9 (By similarity). Ubiquitinates MAP3K7 through 'Lys-48'-linked conjugation (PubMed:25632008). Involved in the regulation of apoptosis and reactive oxygen species levels through the ubiquitination and proteasomal degradation of TXNIP (By similarity). Mediates the antiapoptotic activity of epidermal growth factor through the ubiquitination and proteasomal degradation of p15 BID (PubMed:20392206). Ubiquitinates BRAT1 and this ubiquitination is enhanced in the presence of NDFIP1 (By similarity).[UniProtKB/Swiss-Prot Function]