

Product datasheet for **MG221570**

Ank1 (NM_031158) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ank1 (NM_031158) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ank1
Synonyms:	Ank-1; nb; pale
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG221570 representing NM_031158, codon optimized . Due to the complexity of NM_031158, the ORF clone is codon optimized for mammalian Expression. The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCAGAGCGGCGCGCAGGTCGGGGTCAGACCCCGCGCCGATGCTGTACCAGCTTTCTGCGGGCGG
CACGCTCGGGGAACCTGGACAAGGCTCTGGATCACCTGCGCAATGGAGTGGACATTAACACCTGTAACCA
GAACGGGTTGAACGGCCTGCATCTGGCCTCAAAGAAGGCCATGTGAAGATGGTGGTTGAACTTCTGCAC
AAAGAGATCATTCTAGAAACGACAACCAAGAAGGGGAACACTGCTCTGCACATCGCTGCCCTTGCTGGTC
AGGATGAGGTGGTCCGGGAGCTGGTCAACTATGGAGCCAATGTCAATGCCAGTCTCAGAAAAGCCTTTAC
TCCCCTGTACATGGCTGCTCAGGAGAACCCTTGAAGTGGTAAATTTCTACTGGAGAATGGAGCCAAT
CAGAATGTAGCCACAGAAGATGGCTTCACCCCACTGGCCGTGGCTCTACAGCAGGGTCACGAGAATGTGG
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TTCACACCCCTCCACATCGCAGCTCACTATGAGAACCTCAACGTGGCCCGATTGCTCCTCAACAGGGGAG
CCAGCGTCAACTTACACCTCAGAATGGCATCACCCACTACACATCGCCTCCCGCAGGGGGAACGTGAT
CATGGTGAGACTCCTGCTGGACCGAGGGGCTCAGATAGAAACGAGGACCAAGGATGAATTGACACCGCTC
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CCAAAACCAAGAATGGCTTGTCCCAATCCACATGGCCGCTCAGGGAGACCCTCGACTGTGTCGGACT
TCTATTGCAATACAATGCAGAGATAGACGACATCACCTTGGATCACCTGACTCCTCTCCATGTGGCAGCC
CACTGTGGCCACCACGGGTGGCTAAGGTTCTTTGGATAAAGGGGCCAAGCCCAACTCCAGAGCCCTGA



ATGTTTTACCCGTTACACATCGCTGCAAGAAGAACCACATCCGTGTAATGGAGTTGCTGCTGAAGAC
 AGGAGCCTCCATCGACGCGGTCACTGAGTCTGGCCTGACACCTCTCCACGTAGCCTCCTTCATGGGACAC
 CTTCTATTGTGAAGAATTACTGCAGCGGGGAGCGTCACCCAATGTCTCCAATGTGAAAGTAGAAACCC
 CTTGCACATGGCAGCCCGAGCAGGGCATAACAGAAGTGGCCAAATATTTGCTCCAGAACAAGCCAAAGC
 CAACGCCAAGGCCAAGGATGACCAGACACCGCTTCACTGTGCTGCTCGAATCGGCCACACAGGCATGGTG
 AAGCTCCTGCTGGAGAATGGTCCAGCCCAATCTGGCTACCAGTGTGGCCACACACCCCTACACACCG
 CAGCCCTGAGGGACACGTGGACACAGCCCTGGCCCTGCTGGAGAAGGAGGCATCCCAAGCCTGCATGAC
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 GAACACGATGCACACCCCAATGCAGCTGGGAAGAAGCGCTTGACTCCTCTGCATGTGGCCGTCCATCACA
 ACAACCTGGACATTGTCAAACCTTCTTCCCCGAGGTGGCTCCCCCACAGCCCTGCCTGGAATGGCTA
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 ACAAGGACACACAGACATTGTGACATTGCTCCTGAAGAATGGTGTCTTCCAAATGAGGTGAGCTCGAAC
 GGAACACACCTCTGGCAATAGCCAAACGTTTGGGCTACATCTCTGTAACAGACGTGCTCAAGGTGGTCA
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 CAGGAGAGCAGGTGACGGAGGAACAATTCACAGATGAACAGGGCAACATTGTTACCAAGAAGATCATTCCG
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 GGGAGTGGACTCCAGCCGACCTGATAGAGGGCAGGAAGGGGGCTCAGATAGTGAAGCGGGCCAGCTGA
 AAAGGGCAAGCAG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG221570 representing NM_031158
 Red=Cloning site Green=Tags(s)

MAERPRRSGSDPAADAATSFLRAARSGNLDKALDHLRNGVDINTCNQNLNGLHLASKEGHVKMVVELLH
 KEIILETTTKKGNALHIAALAGQDEVVREL VNYGANVNAQSQKGF TPL YMAAQENHLEVVKFLLENGAN
 QNVATEDGFTPLAVALQQGHENVVAHL INYGTKGKVR L PALHIAARNDDTRTA AVLL QNDPNPDL SKTG
 FTPLHIAAHYENLNVAQ LLLNRGASVNF TPQNGITPLHIAARRGNVIMVRL LLD RGAQIE TRTKDEL TPL
 HCAARNGHVR ISEI LLDHGAPIQAKTKNGLSPIHMAAQGDHLDCVRL LLYNAE IDDI TL DHL TPLHVAA
 HCGHHRVAKVLLDKGAKPNSRALNGFTPLHIAACKNHIRVMEL L LKTGAS IDAVTESGL TPLHVASFMGH
 LPIVKNLLQRGASPNVSNVYK VETPLHMAARAGHTEVAKYLLQNKAKANAKAKDDQ TPLHCAARIGHTGMV
 KLLLENGASP NLATTAGHTPLHTAAREGHVDTALALLEKEASQACMTKKGF TPLHVAAYKGVRLAELL
 EHD AHPNAAGKNG L TPLHVAVHHNLDI V K L L PRGGSPHSPAWNGY TPLHIAAKQNQIEVARSL LQYGG
 SANAESVQGV TPLHLAAQEGHTEMVALLSKQANGNLGNK SGL TPLHLVSQEGHVPVADVL IKHGVTVDA
 TTRMGY TPLHVASHYGNIKL VKFLLQH QADVNAKTKL GYSPLHQAAQQGHTDI V T L L L KNGASPNVSSN
 GTTPLAI AKRLGYISVTDV LKVVTD ETSVVLVSDKHRMSYPETVDEILDVSEDEGTAHISIMGDELVSGK
 AERRDSRDVGEKE LLD FVPKLDQVVE SPAIPRIPC VTPETV V IRSE DQEASKEYDEDSLIPSSPATET
 SDNISPVASPVHTGFLV S F MVDARGGSMRGRHNL RVVIPPRTCAAPTRITCRLVKPQKLNTPPPLAEE
 EGLASRIIALGPTGAQFLSPVIVEIPHFA SHGRGDREL VVLRSENGSVWKEHKSRYGESYLDQILNGMDE
 ELGSL EEEKKRVCRIIT TDFPL YFVIMSRLCQDYDTIGPEGGSLRSKL VPLVQATFPENAVTKVKLAL
 QAQPVPDEL VTKLLGNQATFSPIVTV EPRRRKFHRPIGLRIPLPSWTDNPRDSGEGD TTSRL L L C S V I G
 GTDQAQWEDITGTTKLIYANECANFTTNVSARFWLSDCPRTA EAVHFATLLYKELTAVPYMAKFVIFAKM
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 RENRLAIPVKVRDSSREPGGFLSFLRKTMYEDTQHILCHLNITMPPCTKGS GAEDRRRTL TPLTLRYSI
 LSESRLGFTSDTDRVEMRMAVIREHLGLSWAELARELQFSVEDINRIRVENPN SLLDQSTALLTLWVDRE
 GENAKMENLYTALRNIDRSEIVNMLESGRQSRNLK PERRHGDREYS LSPSQVNGYSSLQDELLSPASLQ
 YALPSPLCADQYWNEVAVIDAIPLAATEHDTMLEMSDMQVWSAGLTPSLVTAEDSSLECSKAEDSDAIP E
 WKLEGAHSEDTQGP E LGSQDLVEDD TVDSDATNGLADLLGQQRVHARITDSPSVRQVLD R S QARTLDWDK
 QGSTAVHPQEATQSSWQEEVTQGP HSFQRRITTIQGPEPGALQEYEQVLVSTREHVQRGPPETGSPKAGK
 EPSLWAPESAFSQEVQGD E L QNIPGEQVTEE QFTDEQGNIVTKKIIRKVVVRQVDSSGAIDTQQHEEVELR
 GSGLQPD LIEGRKGAQIVKRASLKRKQ

TRTRPLE – GFP Tag – V

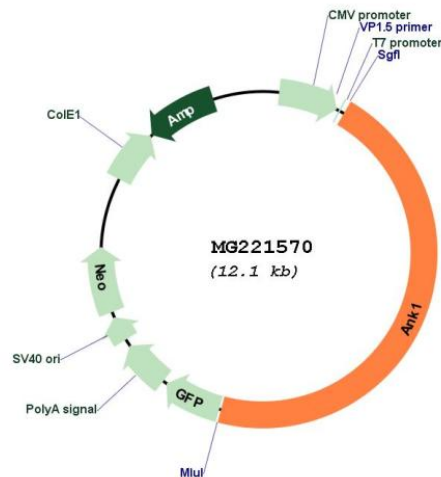
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM_031158

ORF Size:

5544 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:	<u>NM_031158.4</u> , <u>NP_112435.2</u>
RefSeq Size:	8179 bp
RefSeq ORF:	5547 bp
Locus ID:	11733
UniProt ID:	<u>Q02357</u>
Cytogenetics:	8 11.42 cM
Gene Summary:	Attaches integral membrane proteins to cytoskeletal elements; binds to the erythrocyte membrane protein band 4.2, to Na-K ATPase, to the lymphocyte membrane protein GP85, and to the cytoskeletal proteins fodrin, tubulin, vimentin and desmin. Erythrocyte ankyrins also link spectrin (beta chain) to the cytoplasmic domain of the erythrocytes anion exchange protein; they retain most or all of these binding functions. In skeletal muscle, isoform Mu7 together with obscurin may provide a molecular link between the sarcoplasmic reticulum and myofibrils.[UniProtKB/Swiss-Prot Function]