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Product datasheet for MG203857

Dnase1 (NM_010061) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dnase1 (NM_010061) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Dnase1
Synonyms:	AI788650; DNaseI; Dnl1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG203857 representing NM_010061
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCGGTACACAGGGCTAATGGGAACACTGCTCACCTTGGTCAACCTGCTGCAGCTGGCTGGGACTCTGA
GAATTGCAGCCTTCAACATTCGGACTTTTGGGGAGACTAAGATGTCCAATGCTACCCTCTCTGTATACTT
TGTGAAAATCCTGAGTCGCTATGACATCGCTGTTATCCAAGAGGTCAGAGACTCCCACCTGGTTGCTGTT
GGGAAGCTCCTGGATGAACTCAATCGGGACAAACCTGACACCTACCGCTATGTAGTCAGTGAGCCGCTGG
GCCGTAAAAGCTACAAGGAACAGTACCTTTTTGTGTACAGGCCTGACCAGGTGTCTATTCTGGACAGCTA
TCAATATGATGATGGCTGTGAACCCTGTGGAAATGACACCTTCAGCAGAGAGCCAGCCATTGTTAAGTTC
TTTTCCCCATACACTGAGGTCCAAGAATTTGCGATCGTGCCCTTGCATGCAGCCCCAACAGAAGCTGTGA
GTGAGATCGACGCCCTCTACGATGTTTACCTAGATGTCTGGCAAAAGTGGGGCCTGGAGGACATCATGTT
CATGGGAGACTTCAATGCTGGCTGCAGCTACGTCACTTCCTCCCAGTGGTCCTCCATTCGCCTTCGGACA
AGCCCCATCTTCCAGTGGCTGATCCCTGACAGTGCGGACACCACAGTCACATCAACACACTGTGCTTATG
ACAGGATTGTGGTTGCTGGAGCTCTGCTCCAGGCTGCTGTTGTTCCCAACTCGGCTGTTCCTTTTGATTT
CCAAGCAGAATACAGACTTTCCAACCAGCTGGCTGAAGCCATCAGTGACCATTACCCAGTGGAGGTGACA
CTCAGAAAAATC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

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Protein Sequence:

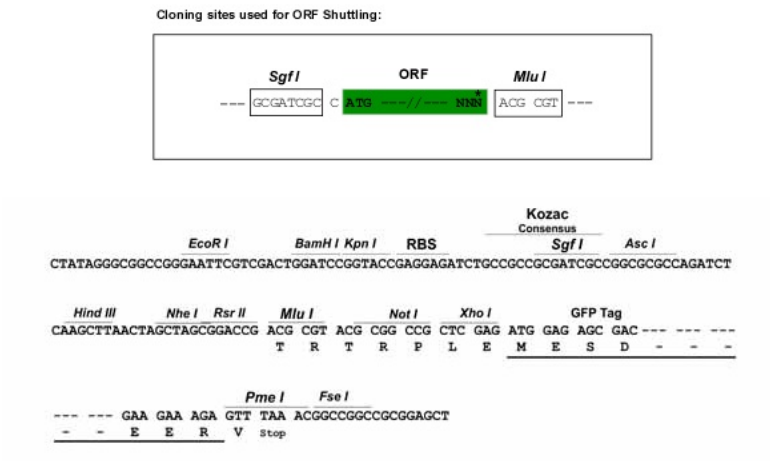
>MG203857 representing NM_010061
Red=Cloning site Green=Tags(s)

MRYTGLMGTLLTLVNLLQLAGTLRIAAFNIRTFGETKMSNATLSVYFVKILSRYDIAVIQEVRDSHLVAV
GKLLDELNRDKPDTYRYVVSEPLGRKSYKEQYLFVYRPDQVSILDSYQYDDGCEPCGNDTFSREPAIVKF
FSPYTEVQEFAIVPLHAAPTEAVSEIDALYDVYLDVWQKWGLEDIMFMGDFNAGCSYVTSSQWSSIRLRT
SPIFQWLIPDSADTTVTSTHCAYDRIVVAGALLQAAVVPNSAVPFDFQAEYRLSNQLAEAISDHYPVEVT
LRKI

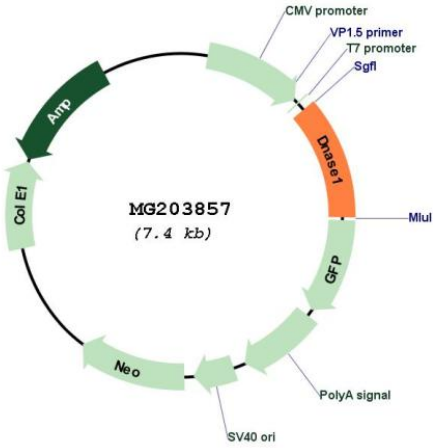
TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_010061

ORF Size: 852 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_010061.4, NP_034191.2
RefSeq Size:	1312 bp
RefSeq ORF:	855 bp
Locus ID:	13419
UniProt ID:	P49183
Cytogenetics:	16 2.37 cM
Gene Summary:	Serum endocuclease secreted into body fluids by a wide variety of exocrine and endocrine organs (PubMed:29191910). Expressed by non-hematopoietic tissues and preferentially cleaves protein-free DNA. Among other functions, seems to be involved in cell death by apoptosis. Binds specifically to G-actin and blocks actin polymerization (By similarity). Together with DNASE1L3, plays a key role in degrading neutrophil extracellular traps (NETs) (PubMed:29191910). NETs are mainly composed of DNA fibers and are released by neutrophils to bind pathogens during inflammation (PubMed:29191910). Degradation of intravascular NETs by DNASE1 and DNASE1L3 is required to prevent formation of clots that obstruct blood vessels and cause organ damage following inflammation (PubMed:29191910). [UniProtKB/Swiss-Prot Function]