POT1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	POT1, Polyclonal Antibody
Full Product Name	POT1 Antibody, Biotin conjugated
Product Gene Name	anti-POT1 antibody
Product Synonym Names	Protection of telomeres protein 1; hPot1; POT1-like telomere end-binding protein; POT1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid
Purity/Purification	>95%, Protein G purified
Preparation and Storage	Shipped at 4 degree C. Upon delivery aliquot and store at -20 degree C or -80 degree C. Avoid repeated freeze.
Matching Pairs	Unconjugated Antibody: POT1 (MBS7053233) Biotin Conjugated Antibody: POT1 (MBS7053236)
Molecular Weight	60,534 Da
OMIM	AY823520 mRNA
3D Structure	ModBase 3D Structure for Q9NUX5
Immunogen	Recombinant Human Protection of telomeres protein 1 protein (250-432AA)
Conjugation	Biotin
Preservative	0.03% Proclin 300
Constituents	50% Glycerol, 0.01M PBS, pH 7.4
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-POT1 antibody	ELISA (EIA)
Related Product Information for anti-POT1 antibody	Component of the telomerase ribonucleoprotein (RNP) complex that is essential for the replication of chromosome termini. Is a component of the double-stranded telomeric DNA-binding TRF1 complex which is involved in the regulation of telomere length by cis-inhibition of telomerase. Also acts as a single-stranded telomeric DNA-binding protein and thus may act as a downstream effector of the TRF1 complex and may transduce information about telomere maintenance and/or length to the telomere terminus. Component of the shelterin complex (telosome) that is involved in the regulation of telomere length and protection. Shelterin associates with arrays of double-stranded TTAGGG repeats added by telomerase and protects chromosome ends; without its protective activity, telomeres are no longer hidden from the DNA damage surveillance and chromosome ends are inappropriately processed by DNA repair pathways. Binds to two or more telomeric single-stranded 5'-TTAGGG-3' repeats (G-strand) and with high specificity to a minimal telomeric single-stranded 5'-TAGGGTTAG-3' sequence. Binds telomeric single-stranded sequences internally or at proximity of a 3'-end. Its activity is TERT dependent but it does not increase TERT activity by itself. In contrast, the ACD-POT1 heterodimer enhances telomere elongation by increasing telomerase processivity.

Other Notes	Small volumes of anti-POT1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for POT1 purchase	MBS7053236 is an antibody targeting POT1. Also known as POT1 Antibody, Biotin conjugated. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for POT1. It may not necessarily be applicable to this product.

NCBI GI #	110671314
NCBI GeneID	25913
NCBI Accession #	NP_001036059.1
UniProt Primary Accession #	Q9NUX5
UniProt Secondary Accession #	O95018; Q5MJ36; Q9H662; Q9NW19; Q9UG95
UniProt Related Accession #	Q9NUX5
GenBank Nucleotide #	NM_001042594.1
NCBI Official Full Name	protection of telomeres protein 1 isoform 4
NCBI Official Synonym Full Names	protection of telomeres 1
NCBI Official Symbol	POT1
NCBI Official Synonym Symbols	GLM9; CMM10; HPOT1
UniProt Protein Name	Protection of telomeres protein 1
UniProt Synonym Protein Names	POT1-like telomere end-binding protein
Protein Family	3-ketoacyl-CoA thiolase
UniProt Gene Name	POT1
UniProt Synonym Gene Names	hPot1
NCBI Protein Information	protection of telomeres protein 1
NCBI Summary for POT1	This gene is a member of the telombin family and encodes a nuclear protein involved in telomere maintenance. Specifically, this protein functions as a member of a multi-protein complex that binds to the TTAGGG repeats of telomeres, regulating telomere length and protecting chromosome ends from illegitimate recombination, catastrophic chromosome instability, and abnormal chromosome segregation. Increased transcriptional expression of this gene is associated with stomach carcinogenesis and its progression. Alternatively spliced transcript variants have been described. [provided by RefSeq, Jul 2008]

UniProt Comments for POT1	POT1: Component of the telomerase ribonucleoprotein (RNP) complex that is essential for the replication of chromosome termini. Is a component of the double-stranded telomeric DNA- binding TRF1 complex which is involved in the regulation of telomere length by cis-inhibition of telomerase. Also acts as a single-stranded telomeric DNA-binding protein and thus may act as a downstream effector of the TRF1 complex and may transduce information about telomere maintenance and/or length to the telomere terminus. Component of the shelterin complex (telosome) that is involved in the regulation of telomere length and protection. Shelterin associates with arrays of double-stranded TTAGGG repeats added by telomerase and protects chromosome ends; without its protective activity, telomeres are no longer hidden from the DNA damage surveillance and chromosome ends are inappropriately processed by DNA repair pathways. Binds to two or more telomeric single-stranded 5'-TTAGGG-3' repeats (G-strand) and with high specificity to a minimal telomeric single-stranded 5'- TAGGGTTAG-3' sequence. Binds telomeric single-stranded sequences internally or at proximity of a 3'-end. Its activity is TERT dependent but it does not increase TERT activity by itself. In contrast, the ACD-POT1 heterodimer enhances telomere elongation by increasing telomerase processivity. Belongs to the telombin family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: DNA-binding Chromosomal Location of Human Ortholog: 7q31.33 Cellular Component: chromosome, telomeric region; nuclear chromosome, telomeric region; nuclear telomere cap complex; nucleoplasm; nucleus Molecular Function: DEAD/H-box RNA helicase binding; protein binding; single-stranded telomeric DNA binding; telomeric DNA binding Biological Process: DNA duplex unwinding; negative regulation of telomerase activity; positive regulation of helicase activity; positive regulation of telomerase activity; positive regulation of telomere maintenance via telomerase; telomere assembly; telomere capping; telomere maintenance via telomerase Disease: Glioma Susceptibility 9; Melanoma, Cutaneous Malignant, Susceptibility To, 10
Research Articles on POT1	**1.** Coats plus is caused by a defect in POT1/CST-dependent telomere fill-in
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