Protection of Telomeres 1 Homolog (POT1) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Protection Of Telomeres 1 Homolog (POT1), Polyclonal Antibody
Full Product Name	Biotin-Linked Polyclonal Antibody to Protection Of Telomeres 1 Homolog (POT1)
Product Gene Name	anti-POT1 antibody
Product Synonym Names	Protection Of Telomeres 1 Homolog; hPot1; POT1-like telomere end-binding protein
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid. 0.01M PBS, pH7.4, containing 0.05% Proclin-300, 50% glycerol.
Purity/Purification	Affinity Chromatography
Concentration	>=0.5mg/mL (Please refer to the vial label for the specific concentration.) (lot specific)
Preparation and Storage	Store at 2 degree C to 8 degree C for frequent use, -20 degree C for 12 months Stable for 12 months if correctly stored.
Matching Pairs	Antibody: POT1 (MBS2143753) Immunogen: POT1 (MBS2124666)
Matching Pairs	Unconjugated Antibody: POT1 (MBS2151653) Biotin Conjugated Antibody: POT1 (MBS2143753)
Molecular Weight	71,442 Da
Immunogen Sequence Positions	Met1~Ala177
OMIM	606478
3D Structure	ModBase 3D Structure for Q9NUX5
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Conjugation	Biotin
Product Categories/Family for anti-POT1 antibody	Polyclonal Antibodies (Primary Abs); Primary, Biotin-conjugated; Tumor immunity
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for anti-POT1 antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunoprecipitation (IP)
Application Notes for anti-POT1 antibody	WB: 0.5-2ug/mL IHC: 5-20ug/mL ICC: 5-20ug/mL
Related Product Information for anti-POT1 antibody	MBS2143753 is an antibody targeting POT1. Also known as Biotin-Linked Polyclonal Antibody to Protection Of Telomeres 1 Homolog (POT1). Reactive in Human. Host: Rabbit.
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.

ADDITIONAL DETAILS

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

NCBI GI #	98991776
NCBI GeneID	25913
NCBI Accession #	NP_056265.2
UniProt Primary Accession #	Q9NUX5
UniProt Secondary Accession #	O95018; Q5MJ36; Q9H662; Q9NW19; Q9UG95
UniProt Related Accession #	Q9NUX5
GenBank Nucleotide #	NM_015450.2
NCBI Official Full Name	protection of telomeres protein 1 isoform 1
NCBI Official Synonym Full Names	protection of telomeres 1
NCBI Official Symbol	POT1
NCBI Official Synonym Symbols	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
UniProt Entry Name	POTE1_HUMAN
NCBI Protein Information	protection of telomeres protein 1; protection of telomeres 1 homolog; POT1-like telomere end-binding protein
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: nucleoplasm; chromosome, telomeric region; nuclear telomere cap complex; cytoplasm; nucleus Molecular Function: protein binding; single-stranded telomeric DNA binding; DEAD/H-box RNA helicase binding Biological Process: positive regulation of helicase activity; negative regulation of telomerase activity; telomere assembly; telomere capping; telomere maintenance via telomerase; positive regulation of telomerase activity; negative regulation of telomere maintenance via telomerase; telomere maintenance; DNA duplex unwinding; positive regulation of telomere maintenance via telomerase Disease: Melanoma, Cutaneous Malignant, Susceptibility To, 10
Research Articles on POT1	**1.** TMPyP4 (meso-tetra(N-methyl-4-pyridyl)porphine) has been widely used as G-quadruplex binding ligand, which stabilized the G-quadruplex in vitro and in cellulo, resulting in down-regulation of pot1 gene transcription.
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