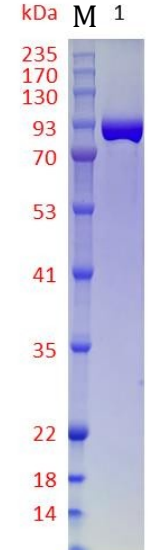


<b>Product Name</b>	Recombinant Human DNA polymerase theta (POLQ) N-terminal Helicase Domain	<p>SDS-PAGE gel</p>  <p>M – MW Marker 1 – POLQ- NTD Helicase Domain</p>
<b>Synonym(s)</b>	DNA polymerase theta, POLθ, POLH, DinB homolog, DNA polymerase q	
<b>Quantity</b>	20 ug, 100 ug, 1 mg	
<b>Species</b>	Human	
<b>Tag</b>	None	
<b>Molecular weight</b>	93.5 kDa	
<b>Purity</b>	>98% by SDS-PAGE	
<b>GenBank Accession</b>	NM_199420.4	
<b>UniProt #</b>	O75417, a. a. 67-894	
<b>Expression Source</b>	Sf9 insect cells	
<b>Application</b>	DNA replication studies, DNA repair mechanisms study, Target for drug development study, Genetic diseases, Cancer research study	
<b>Formulation</b>	20 mM HEPES, pH 7.5, 500 mM NaCl, 0.5 mM TCEP, 5 % glycerol	
<b>Storage and Stability</b>	Stable for 12 months at -80°C, Avoid freeze/thaw cycles	
<b>Description</b>	<p>The Helicase Domain, is a functional domain within the POLQ enzyme that possesses helicase activity. Helicases are enzymes that play a crucial role in DNA replication and repair processes by unwinding double-stranded DNA.</p> <p>The POLQ enzyme, with its N-terminal helicase domain, is involved in DNA repair pathways, particularly in repairing double-strand breaks (DSBs) in the DNA molecule. DSBs are severe DNA lesions that can occur due to various factors such as exposure to radiation or chemical agents. POLQ helps in the repair of DSBs through an alternative, error-prone DNA repair mechanism called alternative end-joining.</p>	
<b>Reference</b>	<p>Mineaki Seki, et al., POLQ (Pol theta), a DNA polymerase and DNA-dependent ATPase in human cells. <i>Nucleic Acids Res.</i> 2003 Nov 1;31(21):6117-26.</p> <p>Maria Chiara Pismataro, et al., Small Molecules Targeting DNA Polymerase Theta (POLθ) as Promising Synthetic Lethal Agents for Precision Cancer Therapy. <i>J Med Chem.</i> 2023 May 3.</p>	

## Related products:

<u>Product Name</u>	<u>Catalog #</u>	<u>Size</u>
DNA Polymerase Theta Activity Assay Kit	362101	96 reactions
DNA Polymerase Theta-C terminal Domain	7657283	20 ug, 100 ug, 1 mg
eIF4E/eIF4G Binding Assay Kit	34343-BK	384 reactions
T7 RNA polymerase	777627	5000 U, 25000U, 100000U
T7 High Yield RNA Synthesis Kit	777627-RK	25 rxns, 50 rxns, 100 rxns
Kras Wild Type (WT), GST-tag	5727-4121G	50 µg, 100 µg
Kras WT, GST-tag, GDP Loaded	5727-WTG-G	50 µg, 100 µg
Kras WT, GST-tag, GppNHp loaded	5727-WTG-GP	50 µg, 100 µg
Kras G12C, His-tag	5727-4122H	50 µg, 100 µg
Kras G12C, GST-tag	5727-4122G	50 µg, 100 µg
Kras G12C, GST-tag, GDP Loaded	5727-4122G -G	50 µg, 100 µg
Kras G12C, GST-tag, GppNHp loaded	5727-4122G -GP	50 µg, 100 µg
Kras G12D, GST-tag	5727-4123G	50 µg, 100 µg
Kras G12D, GST-tag, GDP Loaded	5727-4123G -G	50 µg, 100 µg
Kras G12D, GST-tag, GppNHp loaded	5727-4123G -GP	50 µg, 100 µg
Kras G12R, GST-tag,	5727-4127G	50 µg, 100 µg
Kras G12R, GST-tag, GDP Loaded	5727-4127G -G	50 µg, 100 µg
Kras G12R, GST-tag, GppNHp loaded	5727-4127G -GP	50 µg, 100 µg
Kras G12V, GST-tag,	5727-4128G	50 µg, 100 µg
Kras G12V, GST-tag, GDP Loaded	5727-4128G -G	50 µg, 100 µg
Kras G12V, GST-tag, GppNHp loaded	5727-4128G -GP	50 µg, 100 µg
Kras WT Nucleotide Exchange Assay Kit	5727-4121NK	384 reactions
Kras G12C Nucleotide Exchange Assay Kit	5727-4122NK	384 reactions
Kras G12D Nucleotide Exchange Assay Kit	5727-4123NK	384 reactions
Kras G12R Nucleotide Exchange Assay Kit	5727-4127NK	384 reactions
Kras G12V Nucleotide Exchange Assay Kit	5727-4128NK	384 reactions
Kras WT – cRAF Binding Assay Kit	5727-4121BK	384 reactions
Kras G12C – cRAF Binding Assay Kit	5727-4122BK	384 reactions

Kras G12D– cRAF Binding Assay Kit	5727-4123BK	384 reactions
Kras G12R – cRAF Binding Assay Kit	5727-4127BK	384 reactions
Kras G12V – cRAF Binding Assay Kit	5727-4128BK	384 reactions
Human RBD-RAF1, N-His tag, C-FLAG tag	7237231	50 µg, 100 µg
Human SOS1, No Tag	7671	50 µg, 100 µg
Human SOS1, His-Avi-Tag	7671HA	50 µg, 100 µg
Recombinant SARS-CoV-2 Mpro, 3CL protease	728201	50 ug, 500 ug
SARS-CoV-2 Mpro (3CL Protease) Assay Kit	728203	96 reactions
Recombinant SARS-CoV-2 Papain-like Protease (PLpro, NSP3), CF	728251	50 ug, 100 ug, 1mg
Papain-like (PLpro) Protease Assay Kit	728253	96 reactions
Recombinant SARS-CoV-2 Helicase (NSP13)	728231	10 ug, 50 ug, 100 ug
Recombinant SARS-CoV-2 NSP7	728264	100 ug, 1mg
Recombinant SARS-CoV-2 NSP8	728265	100 ug, 1mg
TEV-His	190001-R	1,000 Units, 10,000 Units
Recombinant SUMO Protease (Ulp1)	190003	1,000 units, 10,000 units
PreScission Protease (HRV 3C)	190002-R	1,000 units, 10,000 units
Recombinant YopH	200100	10 ug, 20 ug, 100 ug, 1 mg
Recombinant Mouse Leukemia Inhibitory Factor (mLIF)	11-0001	10 ug, 100 ug
Recombinant Human LIF	12-0002	10 ug, 100 ug, 1 mg
Recombinant Human LIF, Animal-Free	12-0002AFR	10 ug, 100 ug, 1 mg
Recombinant Human FGF-basic, Carrier-free	12-0005CFR	50 ug, 100 ug, 500 ug, 1 mg
Recombinant Human BCL2	225201	100 ug



High Purity Protein for Research

## POLQ N-terminal Helicase Domain

Catalog Number: 7657643

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GST-CDK2: His-CyclinE1	C352E1	10 ug, 100 ug
GST-CDK2: His-CyclinA2	C352A2	10 ug, 100 ug
Recombinant Human Malic enzyme 1 (ME1)	180001	10 ug, 25 ug, 100 ug, 1 mg
Recombinant Human Malic enzyme 2 (ME2)	180002	10 ug, 25 ug, 100 ug, 1 mg
Recombinant Human Malic enzyme 3 (ME3)	180003	10 ug, 25 ug, 100 ug, 1 mg

Products are for research use only and are not intended for human use. We do not sell to patients.