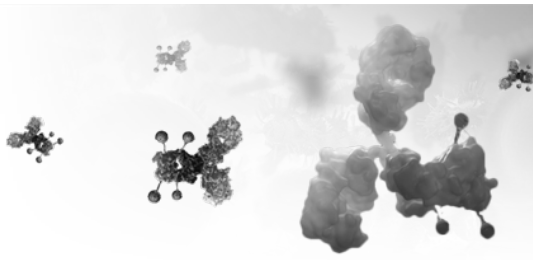

Rabbit Anti-phospho Exo1 (Ser746) polyclonal antibody (CABT-RM105)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Detects Exonuclease 1 phosphorylated on Serine 746. It targets an epitope within 10 amino acids surrounding the phosphoserine 746 residue from the C-terminal region.
Target	phospho Exo1 (Ser746)
Immunogen	KLH-conjugated linear peptide corresponding to 10 amino acids surrounding phosphoserine 746 from the C-terminal region of human Exonuclease 1.
Isotype	IgG
Source/Host	Rabbit
Species Reactivity	Human
Purification	Affinity Purified
Conjugate	unconjugated
Applications	Dot, WB
Epitope	C-terminus
Molecular Weight	~110 kDa observed; 94.10 kDa calculated. Uncharacterized bands may be observed in some lysate(s).
Format	Liquid
Size	100 µl
Buffer	0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl

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Preservative	0.05% sodium azide
Storage	Stable for 1 year at -20°C from date of receipt.Handling Recommendations: Upon receipt and prior to removing the cap, centrifuge the vial and gently mix the solution. Aliquot into microcentrifuge tubes and store at -20°C. Avoid repeated freeze/thaw cycles, which may damage IgG and affect product performance.

BACKGROUND

Introduction	Exonuclease 1 is encoded by the EXO1 gene in human. Exo1 1 is a nuclear enzyme that is shown to colocalize with PCNA to discrete nuclear foci in S-phase. It displays 5' to 3' exonuclease activity as well as an RNase H activity. It is highly expressed in bone marrow, testis and thymus and in fetal liver. It participates in DNA mismatch repair (MMR), micro-mediated end-joining, homologous recombination (HR), and replication. It is shown to preferentially cleave one nucleotide inwards in a double stranded region of forked and nicked DNA flap substrates. Exonuclease 1 contains two subdomains, the NH2-terminal (N) domain and the internal (I) domain that are separated by a spacer region. The N-domain is reported to facilitate binding of Exo1 to the DNA and the I-domain exhibits multiple cysteine and glutamate residues that are required for the binding of magnesium ions. Exonuclease 1 is phosphorylated by ATM or ATR in response to DNA damage and agents that stall DNA replication. Phosphorylation at serine 454, threonine 454 and serine 714 is induced upon DNA-damage following treatment with hydroxyurea. These phosphorylations facilitate destabilization/degradation of the protein. Exo1 also displays a direct and robust interaction with 14-3-3 protein which is achieved via phosphorable serine 746. Phosphorylation of serine 746 is shown to occur under basal cellular conditions.
Keywords	Beta D glucan exohydrolase isoenzyme ExoI; EXO1; hExoI; Exonuclease I; HEX1; hExo1

GENE INFORMATION

Entrez Gene ID	9156
UniProt ID	Q9UQ84

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