Revision 1

Store at -20C

#4725

p48 Primase (8G10) Rat mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	48	Rat IgG1	#P49642	5557

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

p48 Primase (8G10) Rat mAb detects endogenous levels of total p48 primase protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with full-length recombinant human p48 primase.

Background

Initiation of eukaryotic DNA replication is a stringently regulated process that requires the cooperation of many proteins and protein complexes to occur efficiently, at the origins of replication, and once per cell cycle. The initiation of DNA replication requires a protein complex composed of two DNA polymerase α subunits and a pair of primase subunits. Primase activity catalyzes *de novo* synthesis of an RNA/DNA primer (initiator DNA) on the leading and lagging strands, while polymerase activity extends the initiator DNA (1). The 48 and 58 kDa primase subunits cooperate in the synthesis of small RNA primers. p48 is the catalytically active subunit (2), while p58 couples p48 to the polymerase to allow the transfer of primers to the active site. The p58 subunit may also play a role in regulation of primer length (3,4).

Background References

1. Shiratori, A. et al. (1995) *Genomics* 28, 350-353.
2. Copeland, W.C. (1997) *Protein Expr. Purif.* 9, 1-9.
3. Copeland, W.C. and Wang, T.S. (1993) *J. Biol. Chem.* 268, 26179-26189.
4. Arezi, B. and Kuchta, R.D. (2000) *Trends Biochem. Sci.* 25, 572-576.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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