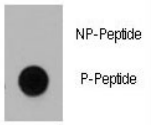
Phospho-Dnmt1 Antibody (pS714) (F48557)

Catalog No.	Formulation	Size
F48557-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48557-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Bovine
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P26358
Applications	Dot Blot : 1:500
Limitations	This phospho-Dnmt1 antibody is available for research use only.



Dot blot analysis of phospho-Dnmt1 antibody. 50ng of phos-peptide or nonphos-peptide per dot were spotted.

Description

Methylation of DNA at cytosine residues plays an important role in regulation of gene expression, genomic imprinting and is essential for mammalian development. Hypermethylation of CpG islands in tumor suppressor genes or hypomethylation of bulk genomic DNA may be linked with development of cancer. To date, 3 families of mammalian DNA methyltransferase genes have been identified which include Dnmt1, Dnmt2 and Dnmt3. Dnmt1 is constitutively expressed in proliferating cells and inactivation of this gene causes global demethylation of genomic DNA and embryonic lethality.

Dnmt2 is expressed at low levels in adult tissues and its inactivation does not affect DNA methylation or maintenance of methylation. The Dnmt3 family members, Dnmt3a and Dnmt3b, are strongly expressed in ES cells but their expression is down regulated in differentiating ES cells and is low in adult somatic tissue. Dnmt1 co-purifies with the retinoblastoma (Rb) tumour suppressor gene product, E2F1, and HDAC1. Dnmt1 also cooperates with Rb to repress transcription from promoters containing E2F binding sites suggesting a link between DNA methylation, histone deacetylase and sequence-specific DNA binding activity, as well as a growth-regulatory pathway that is disrupted in nearly all cancer cells.

Application Notes

Titration of the phospho-Dnmt1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

This phospho-Dnmt1 antibody was produced from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding pS714 of human Dnmt1.

Storage

Aliquot the phospho-Dnmt1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.