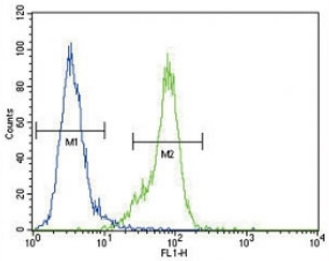
# Dnmt1 Antibody (F40596)

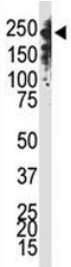
| Catalog No. | Formulation | Size |
|---|---|---|
| F40596-0.4ML | In 1X PBS, pH 7.4, with 0.09% sodium azide | 0.4 ml |
| F40596-0.08ML | In 1X PBS, pH 7.4, with 0.09% sodium azide | 0.08 ml |

**Bulk quote request**

| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit Ig |
| **Purity** | Purified |
| **UniProt** | P26358 |
| **Applications** | Flow Cytometry : 1:10-1:50<br>Western Blot : 1:1000 |
| **Limitations** | This Dnmt1 antibody is available for research use only. |




Dnmt1 antibody flow cytometric analysis of MDA-MB435 cells (right histogram) compared to a negative control (left histogram). FITC-conjugated goat-anti-rabbit secondary Ab was used for the analysis.




Western blot analysis of Dnmt1 antibody and Jurkat cell lysate. Predicted molecular weight: 180-200 kDa

## 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 E2 Fbinding 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 Dnmt1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

## Immunogen

A portion of amino acids 1588-1616 from the human protein was used as the immunogen for this Dnmt1 antibody.

## Storage

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