

**Anti-MLF1 Interacting Protein pT78 (RABBIT) Antibody**  
**MLF1 phospho T78 Antibody**  
**Catalog # ASR5354****Specification****Anti-MLF1 Interacting Protein pT78 (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	This affinity purified antibody has been tested for use in ELISA, western blotting, IF, and IHC. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 65 kDa in size corresponding to MLF1IP protein by western blotting in the appropriately stimulated tissue, cell lysate or extract.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids surrounding Thr78 of human MLF1IP protein. The immunogen peptide is phosphorylated at Thr78.
Preservative	0.01% (w/v) Sodium Azide

**Anti-MLF1 Interacting Protein pT78 (RABBIT) Antibody - Additional Information****Gene ID** 79682**Other Names**  
79682**Purity**

This product was affinity purified from monospecific antiserum by immunoaffinity chromatography using phospho-peptide coupled to agarose beads followed by solid phase adsorption against the non-phospho peptide. This antibody is specific for human MLF1IP protein phosphorylated at Thr78. A BLAST analysis was used to suggest cross-reactivity with MLF1IP protein from human, dog, bovine and chimpanzee based on 100% homology with the immunizing sequence. Expect partial reactivity with homologues from rat and mouse (90% homology). Reactivity against homologues from other sources is not known.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended

storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Precautions Note**

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

**Anti-MLF1 Interacting Protein pT78 (RABBIT) Antibody - Protein Information**

**Name** CENPU

**Synonyms** ICEN24, KLIP1, MLF1IP, PBIP1

**Function**

Component of the CENPA-NAC (nucleosome-associated) complex, a complex that plays a central role in assembly of kinetochore proteins, mitotic progression and chromosome segregation. The CENPA-NAC complex recruits the CENPA-CAD (nucleosome distal) complex and may be involved in incorporation of newly synthesized CENPA into centromeres. Plays an important role in the correct PLK1 localization to the mitotic kinetochores. A scaffold protein responsible for the initial recruitment and maintenance of the kinetochore PLK1 population until its degradation. Involved in transcriptional repression.

**Cellular Location**

Cytoplasm. Nucleus. Chromosome, centromere, kinetochore. Note=Localizes in the kinetochore domain of centromeres Colocalizes with PLK1 at the interzone between the inner and the outer kinetochore plates

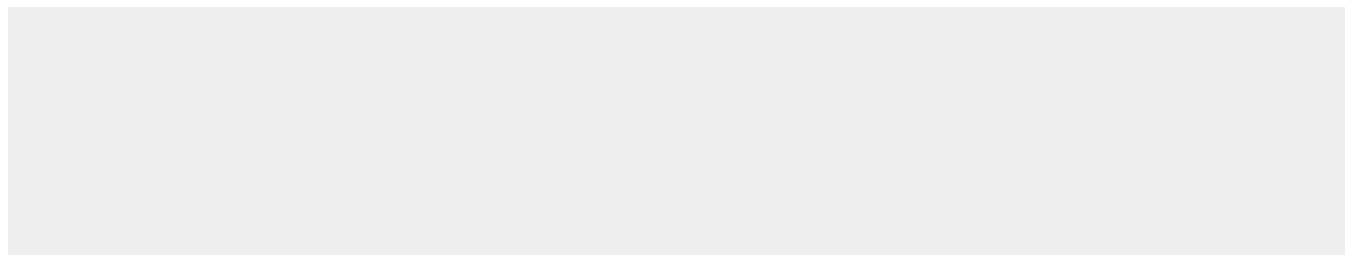
**Tissue Location**

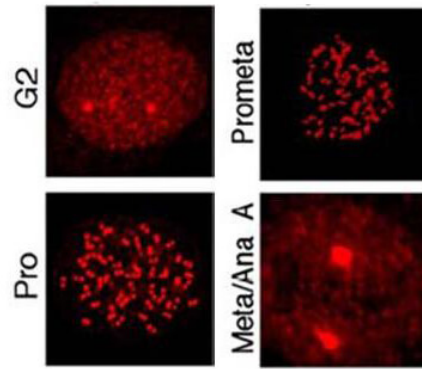
Expressed at high levels in the testis, fetal liver, thymus, bone marrow and at lower levels in the lymph nodes, placenta, colon and spleen. Present in all cell lines examined, including B-cells, T-cells, epithelial cells and fibroblast cells Expressed at high levels in glioblastoma cell lines

**Anti-MLF1 Interacting Protein pT78 (RABBIT) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Anti-MLF1 Interacting Protein pT78 (RABBIT) Antibody - Images**



Immunostaining using Rockland's affinity purified anti-MLF1IP pT78 antibody shows detection of MLF1IP pT78 at the kinetochores of HeLa cells in different phases of the cell cycle. Fluorescent signals were detectable at the kinetochores as early as G2, became most abundant in prophase cells with a discernible nuclear envelope, and gradually diminished as cells proceeded through mitosis (Kang & Park, et al., 2006).

### **Anti-MLF1 Interacting Protein pT78 (RABBIT) Antibody - Background**

This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI). Myeloid leukemia factor-1 (MLF1) Interacting Protein (also known as Centromere Protein U) is a novel polo-like kinase 1 (Plk1) substrate. Plk1 phosphorylation of MLF1IP induces ubiquitination and degradation of MLF1IP prior to the metaphase/anaphase transition. Several Plk1-dependent phosphorylation sites have been identified on MLF1IP by mass spectrometry. Mutations of these sites stabilize MLF1IP and inhibit mitotic progression. Subsequent *in vitro* and *in vivo* MLF1IP phosphorylation and stability assays have revealed that phosphorylation of Thr78 is critical for triggering Plk1-dependent MLF1IP degradation. Expression of a non-degradable Thr78Ala mutant was sufficient to induce a mitotic block. Timely phosphorylation of MLF1IP on Thr78 by Plk1 is critical for eliminating the MLF1IP-imposed mitotic block prior to anaphase onset. Anti-MLF1 pT78 Antibody is useful for researchers interested in Cell Cycle Proteins, Chromatin, and Ubiquitin Research.