

## 抗 cMyc phospho-Ser62 抗体、モノクローナル(33A12E10)

71-161 100 µg

保存： -20°C (輸送：4°C または -20°C)

反応性: Ser62 がリン酸化されたヒト及びマウス cMyc タンパク質。ラットも同じ配列を持っているので、反応すると考えられるがテストされていない。

抗原： ヒト cMyc タンパク質の phospho-Ser62 を含む合成ペプチド

### 用途

1. ウェスタンブロッティング (~1 µg/ml)
2. 免疫蛍光染色 (0.5-1.0 µg/ml)
3. 免疫組織染色 (5 µg/ml, Perform heat mediated antigen retrieval with citrate buffer pH 6 before formalin treated paraffin embedded sectioning)
4. Flow cytometry (Use 1 µg for 10<sup>6</sup> cells)
5. ELISA (Assay-dependent)

**背景：** cMyc はヒトの種々の癌で広く高発現しているプロトオンコジーンである。cMyc タンパク質は多数の遺伝子の転写の促進と抑制に働き、細胞の増殖、アポトーシス、分化、幹細胞の自己更新を制御している。cMyc タンパク質の Ser62/Thr58 のリン酸化は細胞の増殖と細胞周期の制御に密接に関係している。Ser62 のリン酸化は Ras によって誘導される cMyc 安定化と活性化に必須であり、cMyc の分解のための Thr-58 のリン酸化にも必要である (文献1)。

**Isotype:** マウス IgG2b (κ)

**性状:** 精製モノクローン抗体 (IgG) 1 mg/ml in PBS, 50% glycerol

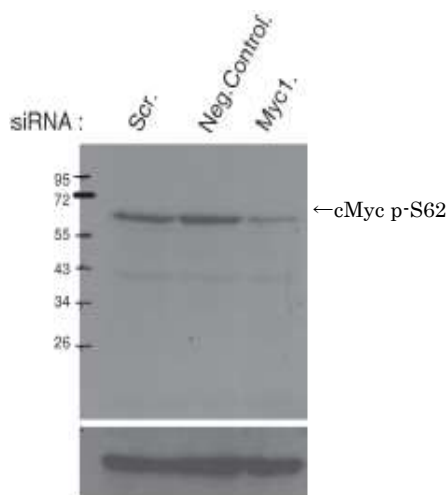
**データリンク** UniProtKB/Swiss-Prot [P01106](#) (MYC\_HUMAN)

**ユーザーのコメント：** "It certainly looks that S62-p-Myc antibody specifically recognizes c-Myc protein in human cancer cells and will be a very useful resource for future studies." Dr. Jukka Westermarck, Institute of Medical Technology, University of Tampere

**文献:** 本抗体は以下の論文に使用されている。文献4で本抗体が詳しく評価されている。

1. Cianfanelli V *et al.* AMBRA1 links autophagy to cell proliferation and tumorigenesis by promoting c-Myc dephosphorylation and degradation. *Nat Cell Biol* 17:20-30 (2015). [PubMed: 25438055](#) **IF, WB (human, mouse)**
2. Myant K, *et al.* Serine 62-Phosphorylated MYC Associates with Nuclear Lamins and Its Regulation by CIP2A Is Essential for Regenerative Proliferation. *Cell Rep.* 2015 Aug 11;12(6):1019-31. [PubMed: 26235622](#). **WB, IF, IHC (human, mouse)**
3. Ischenko I *et al.* Analysis of the tumor-initiating and metastatic capacity of

- PDX1-positive cells from the adult pancreas. *Proc Natl Acad Sci U S A* 111:3466-71 (2014). [PubMed: 24550494](#) **WB (mouse)**
4. Tibbitts DC *et al.* Studying c-Myc serine 62 phosphorylation in leukemia cells: concern over antibody cross-reactivity. *Blood* 119:5334-5 (2012). [PubMed: 22653959](#) **WB, IP (human)**
  5. Tsai WB *et al.* Activation of Ras/PI3K/ERK pathway induces c-Myc stabilization to upregulate argininosuccinate synthetase, leading to arginine deiminase resistance in melanoma cells. *Cancer Res* 72:2622-33 (2012). [PubMed: 22461507](#) **WB (human)**
  6. Mathiasen DP. Identification of a c-Jun N-terminal kinase-2-dependent signal amplification cascade that regulates c-Myc levels in ras transformation. *Oncogene*. 2012 Jan 19;31(3):390-401. [PubMed: 21706057](#) **WB (mouse)**
  7. Wang X. *et al.* Phosphorylation regulates c-Myc's oncogenic activity in the mammary gland. *Cancer Res*. 2011 Feb 1; 71(3): 925–936. [PubMed: 3077809](#) **WB (human)**
  8. Kapeli K & Hurlin PJ Differential Regulation of N-Myc and c-Myc Synthesis, Degradation, and Transcriptional Activity by the Ras/Mitogen-activated Protein Kinase Pathway. *J Biol Chem* 286:38498-508 (2011). **WB**. [PubMed: 21908617](#) **WB (mouse)**
  9. Khanna A. MYC-dependent regulation and prognostic role of CIP2A in gastric cancer. *J Natl Cancer Inst*. 2009 Jun 3;101(11):793-805. [PubMed: 19470954](#) **WB (human)**



**Fig.1. Identification of cMyc protein whose Ser62 is phosphorylated by Western blotting.**

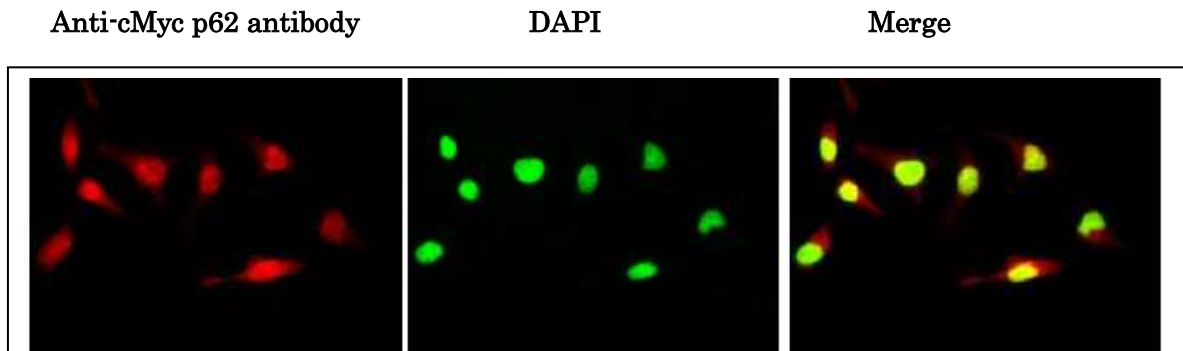
Samples: Crude cell extracts of AGS (gastric adenocarcinoma) cells.

Scr; Scrambled siRNA was introduced into the cells as a negative control.

Neg. Control; Negative control siRNA was transfected.

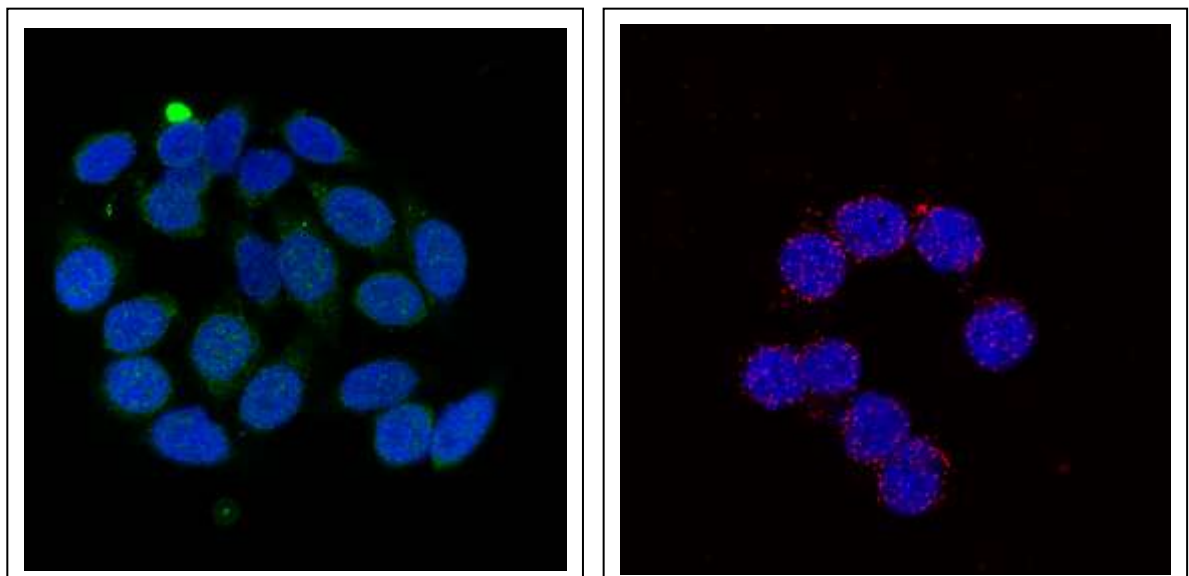
Myc1; siRNA for cMyc was transfected.

(The data was provided by Drs. A. Khanna and J. Westermarck of University of Tampere, Finland)



**Fig.2. Immunofluorescence staining of cMyc phosho-Ser62 in nuclei of HeLa cells.**

1. HeLa cells were fixed with 4% paraformaldehyde overnight, permeabilized with 0.25% Triton X-100 in PBS for 10 min.
2. Incubate cells with 1.5% BSA in PBS for 30 min to block non-specific binding of the antibodies. Incubate the cells with 1/2,000 diluted anti-cMyc p62 antibody in 1% BSA in PBS at 4°C overnight.
3. Incubate cells with a secondary antibody, goat anti-mouse IgG conjugated with Alex 488, at 1/1,000 dilution in 1% BSA for 1 hr at room temperature.
4. Nucleus (DNA) was stained with DAPI



**Fig.3. Immunofluorescence staining of cMyc phosho-Ser62 in HeLa cells**

Left: Cells stained with anti-cMyc pS62 antibody (green) and DAPI (blue)

Right: Proximity Ligation Analysis with anti-cMyc pS62 and CIP2A antibodies, association of cMyc pS62 with CIP2A (red) in nuclei (DAPI, blue)

Images kindly provided by Prof Westermarck J and Dr. Qiao X. For details refer to Ref.2