

Code No. 10367

**Anti-Human
Reticulocalbin-1 (TMU-6A1) Mouse IgG MoAb**

Volume : 50 µg

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- Introduction** : Human Reticulocalbin-1 is a 44kDa protein and belongs to the EF (elongation factor) -hand calcium-binding protein family, and it is known as a luminal protein of endoplasmic reticulum (ER) with the C-terminal HDEL (ER retention signal) sequence. Although it is known that the protein contains six repeated domains each of which has an EF-hand motif, the function of them has not been clarified clearly. In analysis of tumor cells, higher expression of Reticulocalbin-1 is reported in hepatocellular carcinoma than normal hepatocytes and the study suggests the possibility of its involvement in malignancy of human cells through the calcium regulation, but there are few reports regarding the expression of Reticulocalbin-1 in oncology. One of the few study reports that Reticulocalbin-1 has been found to be highly expressed in cultured cells of highly invasive breast cancer, while it has not been found in low invasive cells, however, its significance is not altogether clear.
- One of anticancer drugs most commonly used is cisplatin. Currently, cisplatin (*cis*-diamminedichloroplatinum (II); *cis*-DDP) is a principal drug of cancer chemotherapy, and it shows beneficial effects in some solid cancers such as head and neck cancer, testicular tumor, ovary cancer and small-cell lung cancer.
- Hirano et al. reported that in research of markers of anticancer drug sensitivity, they compared the protein expression of cisplatin-resistant cell strains and its parent strains using the two-dimensional electrophoresis and found a spot which was markedly decreased in expression, and then, the analysis of amino acid sequence showed that the spot was Reticulocalbin-1 (ref. 1).
- Antigen** : Recombinant protein of the C-terminal site (90 a.a.) of human Reticulocalbin-1
- Source** : Mouse-Mouse hybridoma
(X63 - Ag 8.653 × BALB/c mouse spleen cells, supernatant)
- Clone** : TMU-6A1 **Subclass** : IgG₁
- Purification** : Affinity purified with Protein A
- Form** : Lyophilized product from 1 % BSA in PBS containing 0.05 % NaN₃
- How to use** : 1.0 mL deionized water will be added to the product, then its concentration comes to 50 µg/mL
- Stability** : Lyophilized product, 5 years at 2 - 8 °C
: Solution, 2 years at -20 °C
- Application** : This antibody can be used for immunohistochemistry with 10 % neutral buffered formalin fixed paraffin embedded tissues after microwave pretreatment by several techniques such as Avidin Biotin Complex (ABC) Method. The optimal concentration is 0.05 - 5 µg/mL, however, the concentration should be optimized by each laboratory.
: This antibody can be used for western blotting in concentration of 1 - 5 µg/mL
: This antibody can be used for immuno-precipitation in concentration of 3 µg /test.
- Reference** : 1. Hirano T, Kato H, Maeda M, Gong Y, Shou Y, Nakamura M, Maeda J, Yashima K, Kato Y, Akimoto S, Ohira T, Tsuboi M, Ikeda N. Identification of postoperative adjuvant chemotherapy responders in non-small cell lung cancer by novel biomarker. *Int J Cancer*. 2005 Nov 10;117(3):460-8.
2. Fukuda T, Oyamada H, Isshiki T, Maeda M, Kusakabe T, Hozumi A, Yamaguchi T, Igarashi T, Hasegawa H, Seidoh T, Suzuki T. Distribution and variable expression of secretory pathway protein reticulocalbin in normal human organs and non-neoplastic pathological conditions. *J Histochem Cytochem*. 2007 Apr;55(4):335-45.
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