

FUJIFILM

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Code No. 015-25691 (100 µg)

Anti Mutated IDH1/2, Monoclonal Antibody (MsMab-1)**抗変異型 IDH1/2, モノクローナル抗体 (MsMab-1)****Background**

Mutations of isocitrate dehydrogenase 1 (IDH1) and isocitrate dehydrogenase 2 (IDH2) were found to create the capability of the enzyme to change α -ketoglutarate to an oncometabolite, R(-)-2-hydroxyglutarate (2-HG), although IDH1 and IDH2 catalyze the oxidative carboxylation of isocitrate to α -ketoglutarate in cytosol and mitochondria, respectively. IDH1/2 mutations occur in gliomas, cartilaginous tumors, osteosarcomas, and in acute myeloid leukemias. In astrocytomas, oligodendrogliomas, oligoastrocytomas, and secondary glioblastomas, IDH1/2 mutations have been identified as early and frequent genetic alterations (50-93%). They might be the initiating event in these glioma subtypes. In contrast, primary glioblastomas rarely contain IDH1/2 mutations (< 5%). The IDH1 mutations are remarkably specific to a single codon in the conserved and functionally important arginine 132 residue (R132). In contrast, the IDH2 mutations are specific to a single codon in arginine 172 residue (R172) in gliomas. The vast majority of changes are heterozygous. In gliomas, IDH1 mutations were reported as IDH1-R132H (664/716 : 92.7%), IDH1-R132C (29/716 : 4.2%), IDH1-R132S (11/716 : 1.5%), IDH1-R132G (10/716 : 1.4%), and IDH1-R132L (2/716 : 0.2%); IDH2 mutations were reported as IDH2-R172K (20/31 : 64.5%), IDH2-R172M (6/31 : 19.3%), and IDH2-R172W (5/31 : 16.2%).

This Anti Mutated IDH1/2, Monoclonal Antibody is available to detect IDH1-R132H/R132S/R132G, IDH2-R172M/R172S/R172G.

This product is for laboratory use only ; use in any such application is the responsibility of the user.

Description

[Reactivity] IDH1-R132H/R132S/R132G, IDH2-R172M/R172S/R172G

[Species cross reactivity] -

[Clone No.] MsMab-1

[Host] Mouse

[Isotype] IgG_{2a}, kappa

[Source] Purified from hybridoma supernatant using protein G

[Concentration] Indicated on the label

[Formulation] PBS (pH 7.4), containing 0.1% sodium azide

Applications

ELISA 1 µg/mL

Western blot 1 µg/mL

Immunohistochemistry 5 µg/mL

Storage

Store at -20 °C.

Avoid repeated freeze and thaw.

Package

100 µg

References

- 1) Kaneko, M. K., Ogasawara, S. and Kato, Y. : *TJEM*, **230**, 103 (2013).
- 2) Liu, X., Kato, Y., Kaneko, M. K., Sugawara, M., Ogasawara, S., Tsujimoto, Y., Naganuma, Y., Yamakawa, M., Tsuchiya, T. and Takagi, M. : *Cancer Med.*, **2**(6), 803 (2013).
- 3) Ogasawara, S., Kaneko, M. K., Tsujimoto, Y., Liu, X. and Kato, Y. : *Monoclon. Antib. Immunodiagn. Immunother.*, **32**(6), 377 (2013).
- 4) Moriya, K., Kaneko, M. K., Liu, X., Hosaka, M., Fujishima, F., Watanabe, M., Ogasawara, S., Sakuma, J., Sasahara, Y., Kure, S. and Kato, Y. : *Cancer Sci.*, in press

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