Aldolase C Mouse Monoclonal Antibody

MCA-4A9

Applications
WB, IIF/ICC, IHC

Host
Mouse

Isotype
IgG1 heavy, κ

Molecular Wt.
40kDa

Species Cross-Reactivity
Hu, Rt, Ms, Co, Pi

Immunogen:
N-terminal sequence MPHSYPALSAEQKKELSDIA

Recommended dilutions:
WB: 1:2,000, IIF/ICC or IHC: 1:1,000

Store at 4°C for short term, for longer term at -20°C. Avoid freeze / thaw cycles.

Background:

Aldolases are important glycolytic cytosolic enzymes which catalyse the reversible conversion of fructose-1,6-bisphosphate to glyceraldehyde 3-phosphate. There are three aldolase isozymes coded by three distinct genes in mammals, namely aldolases A, B, and C. Aldolase A is heavily expressed in muscle, and aldolase B is a liver-specific enzyme (1-5). In the adult, aldolase C is the brain-specific isozyme expressed in astrocytes and a few classes of neurons, notably Purkinje cells (4). Appropriate antibodies to aldolase C are therefore useful to identify astrocytes in cell culture and sections, and the enzyme may be over expressed in some forms of cancer (6). Recent studies also suggest that detection of aldolase C in blood may be a useful marker of the severity of traumatic brain injury (7).

The MCA-4A9 antibody was made against a recombinant construct including the N-terminal peptide of human aldolase C. Later mapping studies localized the epitope to the peptide HYSYPALSAEQKKELSDIA, amino acids 3-20. Since the three aldolase enzymes are quite similar in amino acid sequence many available antibodies to one protein have usually undocumented cross-reactivity with the other two. However we have used appropriate recombinant constructs to shown that MCA-4A9 is completely specific for aldolase C with no reactivity with either aldolase A or B. Since we know the identity of the peptide used to generate MCA-4A9 is firmly mapped to the N-terminus of aldolase C, a region in which there is considerable variability between the three aldolase enzymes. This antibody works well on western blots and for IF, ICC and IHC.

FOR RESEARCH USE ONLY. NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC use.

### References:


### Applications

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### Storage

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### Recommended dilutions

- WB: 1:2,000
- IIF/ICC or IHC: 1:1,000

### Format

Purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN₃.