



3050 Spruce Street  
Saint Louis, Missouri 63103 USA  
Telephone 800-325-5832 • (314) 771-5765  
Fax (314) 286-7828  
email: techserv@sial.com  
sigma-aldrich.com

## Product Information

### Monoclonal Anti-Kaiso

Clone 6F

Purified Mouse Immunoglobulin

Product Number **K 4263**

#### Product Description

Monoclonal Anti-Kaiso (mouse IgG1 isotype) is derived from the 6F hybridoma produced by the fusion of mouse myeloma cells and splenocytes from A/J mice immunized with recombinant purified mouse Kaiso protein (amino acids 1-499). The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-Kaiso reacts specifically with human, rat, mouse, canine, and chicken Kaiso (approx. 105 kDa). In various preparations an additional band of 40 kDa may be observed. The epitope recognized by the antibody resides within amino acids 1-499 of mouse Kaiso. Monoclonal Anti-Kaiso may be used in ELISA, immunoblotting, immunoprecipitation, and immunocytochemistry.<sup>1</sup>

The BTB/POZ family of transcription factors with zinc finger motifs (POZ or ZF) includes proteins with transcription activation, transcription repression or both activities together. This family consists of several proteins among them BCL-6, PLZF, MIZ-1 and Kaiso.<sup>1-2</sup>

Mouse Kaiso was isolated by a two-hybrid screen where the bait was the human p120<sup>ctn</sup> catenin protein. That Kaiso is a p120<sup>ctn</sup> interacting protein was further demonstrated by its co-immunoprecipitation with p120<sup>ctn</sup> specific antibodies, in many cell lines. No interaction was observed with other members of the cadherin-catenin complex such as  $\beta$ -catenin,  $\alpha$ -catenin or E-cadherin. This protein/protein interaction is mediated by the Arm repeats 1-7 of the p120<sup>ctn</sup> Armadillo domain, and the carboxy-terminal region of Kaiso that contains three putative DNA-binding zinc fingers<sup>1-2</sup>

Murine Kaiso (671 amino acids) has 87% amino acid homology to the human protein. It contains three carboxy-terminal zinc-finger motifs of the Kruppel-like C<sub>2</sub>H<sub>2</sub> zinc fingers and a 120 amino acids POZ domain (pox zinc finger) in its extreme N-terminus, that is highly hydrophobic.<sup>1-2</sup> Kaiso is a transcriptional repressor that recognizes specifically the DNA sequence TCCTGCNA or two symmetrically methylated CpG dinucleotides. The latter activity is distinct from the sequence specific recognition.<sup>3</sup> Sequence specific binding motifs for Kaiso were found in the *matrilysin* gene promoter, while binding to the methyl-CpG motif was identified in the *S100A4* gene promoter.<sup>3</sup> The DNA binding activity of Kaiso could be inhibited by p120<sup>ctn</sup>.<sup>3-4</sup>

#### Reagent

Monoclonal Anti-Kaiso is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, and 15 mM sodium azide.

Antibody Concentration: approx. 2 mg/ml.

#### Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

**Product Profile**

For immunoblotting, a working antibody concentration of 1-2 µg/ml is recommended using CSMLO (mouse mammary adenocarcinoma) cell extracts.

Note: In order to obtain the best results in various techniques and preparation, we recommend determining the optimal working dilution by titration.

**References**

1. Daniel, J.M., et al., *Hybridoma*, **20**, 159-166 (2001).
2. Daniel, J.M., et al., *Mol. Cell. Biol.*, **19**, 3614-3623 (1999).
3. Daniel, J.M., et al., *Nuc. Acid Res.*, **30**, 2911-2919 (2002).
4. Prokhortchouk, A., et al., *Genes Dev.*, **15**, 1613-1618 (2001).

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