



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-Falkor/PHD1

Clone FLK-49

Purified Mouse Immunoglobulin

Product Number **F 5303**

Product Description

Monoclonal Anti-Falkor/PHD1 (mouse IgG2a isotype) is derived from the FLK-49 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino-acids 2-20 of Falkor/PHD1. 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-Falkor/PHD1 recognizes mouse Falkor/PHD1 (approx. 47 kDa). The antibody may be used in ELISA and immunoblotting.

The Falkor protein, thought to be involved in suppression of cell growth, was identified in a search for genes involved in the response to DNA damage by cisplatin.¹ The methodology used, which is known as Genetic Suppressor Elements (GSE), is based on the expression of cDNAs or antisense fragments that inhibit gene expression or function.² Over-expression of the C-terminal part of Falkor or an antisense, caused a growth advantage for the cells, suggesting that Falkor may act as a growth suppressor in cisplatin treated cells.¹

Falkor transcript is a 2 Kb mRNA ubiquitously expressed in mouse tissues, with the strongest expression in testis and the lowest expression in spleen and skeletal muscle. The cDNA encodes for a 419 amino acids protein with a predicted size of 46 kDa. Falkor contains several putative

phosphorylation sites for proteins such as Protein Kinase C and Casein Kinase II. The protein was found to localize to the nucleus probably due to the nuclear localization signal at position 117-120. Falkor has a significant homology to the rat protein SM-20 and to the *C.elegans* EGL-9.³ EGL-9 is involved in the regulation of HIF-1 α , a transcription factor involved in oxygen homeostasis. The human homolog of Falkor and EGL-9 is PHD1, which is 85% homologous in protein sequence. PHD1 (prolyl hydroxylase 1) belongs to a family of three proteins (PHD1, 2 and 3) that function as dioxygenases that regulate HIF-1 α by prolyl hydroxylation.³⁻⁴

Reagent

Monoclonal Anti-Falkor/PHD1 is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 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 minimum working concentration of 0.5 µg/ml is recommended using total cell extracts from 293T cells transfected with Falkor-myc tagged.

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

References

1. Erez, N., et al., *Oncogene*, **21**, 6713-6721 (2002).
2. Gudkov, A., et al., *Proc. Natl. Acad. Sci. USA*, **91**, 3744-3748 (1994).
3. Epstein, A.C., et al., *Cell*, **107**, 43-54 (2001).
4. Huang, J., et al., *J. Biol. Chem.*, **277**, 39792-39800 (2002).

EK/KAA 01/03

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