Technical Data Sheet

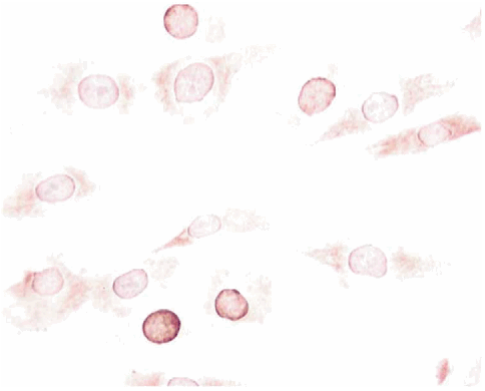
Purified Mouse Anti-CLK1

Product Information

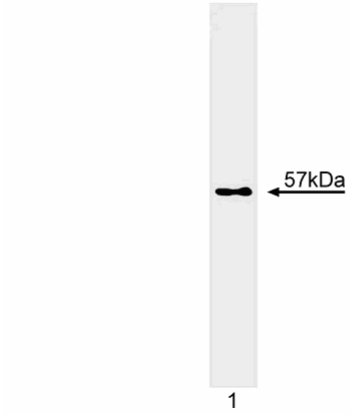
Material Number:	**556388**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	G313-1
Immunogen:	Clk1-fusion protein
Isotype:	Mouse IgM
Reactivity:	QC Testing: Human
Target MW:	57 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Clk (also referred to as Sty) is a mammalian protein kinase that phosphorylates both serine/threonine and tyrosine residues. It belongs to the LAMMER family of dual specificity kinases that also includes KNS1 (from *Saccharomyces cerevisiae*), AFC (from *Arabidopsis thaliana*), and Doa (from *Drosophila melanogaster*). Family members share a highly conserved motif in a subdomain, EHLAMMERILGPLP, of the kinase domain. This motif is not conserved among kinases in general and may be involved in directing substrate specificity. LAMMER kinases are thought to play important roles in the control of cellular growth and differentiation. In particular, Clk has been shown to phosphorylate members of the serine/arginine-rich (SR) family of RNA splicing factors, suggesting that it may play a role in RNA processing. G313-1 recognizes Clk1. Full-length Clk1 migrates at a reduced molecular weight of ~57 kDa. A full-length Clk1-fusion protein was used as immunogen.



Immunohistochemical staining of Clk1. *Cytospin of MG-63 human osteosarcoma cells, pretreated with Triton-X-100, was stained with clone G313-1.*



Western blot analysis of Clk1 in CEM human leukemia cells using anti-Clk1 (clone G313-1).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4°C.

Application Notes

Application

Western blot	Routinely Tested
Immunohistochemistry	Tested During Development

Recommended Assay Procedure:

Applications include western blot analysis (1-2 µg/ml) and immunohistochemistry of tissue-cultured cells (1-5 µg/ml). MG-63 osteosarcoma cells (ATCC CRL-1427) are suggested as a positive control. In western blots, G313-1 detects an immunoreactive protein at 57 kDa representing full-length Clk1. A 40 kDa cross-reactive protein may also detected in MG-63 cells. Although the nature of this band has not been determined, it

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may be a Clk1 degradation product or differentially processed transcript. It is noted that the Clk gene has been reported to express several differentially processed transcripts. In immunohistochemistry, a speckled nuclear pattern, with nucleolar exclusion is observed. Not all cells are stained. In cells lacking nuclear staining, a weaker diffuse cytoplasmic staining may be observed.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Colwill K, Pawson, Andrews B. The Clk/Sty protein kinase phosphorylates SR splicing factors and regulates their intranuclear distribution. *EMBO J.* 1996; 15(2):265-275.(Biology)

Duncan PI, Howell BW, Marius RM, Drmanic S, Douville EM, Bell JC. Alternative splicing of STY, a nuclear dual specificity kinase. *J Biol Chem.* 1995; 270(37):21524-21531.(Biology)