Technical Data Sheet

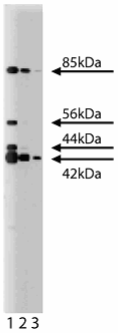
Purified Mouse Anti-ERK (pan ERK)

Product Information

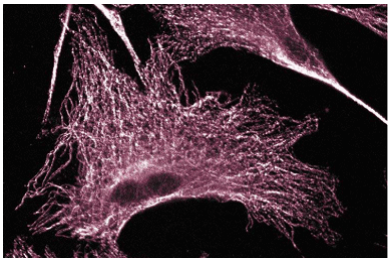
Material Number:	**610123**
Alternate Name:	Extracellular signal Regulated Kinases
Size:	50 µg
Concentration:	250 µg/ml
Clone:	16/ERK (pan ERK)
Immunogen:	Rat ERK2 aa. 219-358
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Mouse Tested in Development: Rat, Human, Dog, Chicken, Frog
Target MW:	42-85 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

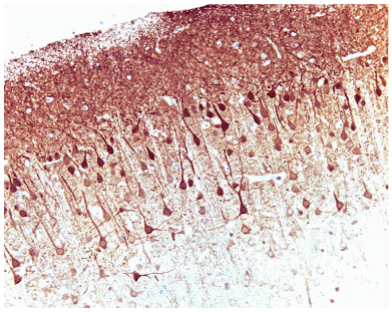
The family of serine/threonine kinases known as ERKs (extracellular signal regulated kinases) or MAPKs (mitogen-activated protein kinases) are activated after cell stimulation by a variety of hormones and growth factors. Cell stimulation induces a signaling cascade that leads to phosphorylation of MEK (MAPK/ERK kinase) which, in turn, activates ERK via tyrosine and threonine phosphorylation. A myriad of proteins represent the downstream effectors for the active ERK and implicate it in the control of cell proliferation and differentiation, as well as regulation of the cytoskeleton. Activation of ERK is normally transient and cells possess dual specificity phosphatases that are responsible for its down-regulation. Furthermore, multiple studies have shown that elevated ERK activity is associated with some cancers. ERK1 may be observable migrating at 44 kDa and ERK2 at 42 kDa in addition to a 54 kDa ERK and a MAP kinase in the 90 kDa range.



Western blot analysis of ERK (pan ERK) on a RSV-3T3 cell lysate. *Lane 1: 1:5000, lane 2: 1:10,000, lane 3: 1:20,000 dilution of the mouse anti-ERK (pan ERK) antibody.*



Immunofluorescence staining of 3T3-L1 cells (Mouse embryonic fibroblasts; ATCC CL-173).



Immunohistochemical staining on a rat brain formalin-fixed paraffin-embedded section with citrate buffer pretreatment (20X magnification).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development
Immunoprecipitation	Tested During Development

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Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Jiang K, Zhong B, Gilvary DL, et al. Syk regulation of phosphoinositide 3-kinase-dependent NK cell function. *J Immunol.* 2002; 168(7):3155-3164.(Biology: Western blot)

Maher P. Phorbol esters inhibit fibroblast growth factor-2-stimulated fibroblast proliferation by a p38 MAP kinase dependent pathway. *Oncogene.* 2002; 21(13):1978-1988.(Biology: Western blot)

Nutt SL, Dingwell KS, Holt CE, Amaya E. Xenopus Sprouty2 inhibits FGF-mediated gastrulation movements but does not affect mesoderm induction and patterning. *Genes Dev.* 2001; 15(9):1152-1166.(Biology: Western blot)

Reszka AA, Seger R, Diltz CD, Krebs EG, Fischer EH. Association of mitogen-activated protein kinase with the microtubule cytoskeleton. *Proc Natl Acad Sci U S A.* 1995; 92(19):8881-8885.(Biology: Immunofluorescence, Western blot)

Watson FL, Heerssen HM, Bhattacharyya A, Klesse L, Lin MZ, Segal RA. Neurotrophins use the Erk5 pathway to mediate a retrograde survival response. *Nat Neurosci.* 2001; 4(10):981-988.(Biology: Immunoprecipitation)