CELL APPLICATIONS, INC.

Erk2 Antibody

Cat. No. CB13472

Applications:	**WB, IHC**
Detected MW:	**42 kDa**
Species & Reactivity:	**Human, Mouse, Rat**
Isotype:	**Mouse IgG2**

BACKGROUND

The mitogen-activated protein kinases (MAP kinases) play a central role in signaling pathways initiated by extracellular stimuli such as growth factors, cytokines, and various forms of environmental stress.[1] To date, four major discrete groups of MAP kinases have been identified in mammalian cells, known as the extracellular signal-regulated kinases (ERK1 and ERK2), the c-Jun amino-terminal kinases (JNK1, JNK2 and JNK3), the p38 kinases (p38alpha, p38beta, p38gamma and p38delta) and ERK5/Big MAP kinase 1 (BMK1). MAP kinases are part of a three-tiered cascade consisting of a MAP kinase, a MAP kinase kinase (MAPKK, MKK or MEK) and a MAP kinase kinase kinase (MAPKKK or MEKK). Phosphorylation of the threonine and tyrosine residues in the T-loop of the MAP kinase, by its upstream kinase, results in activation. The activation of MAP kinases is not a simple switch, however, as both the duration and magnitude of activation is crucial in determining the physiological outcome in cells. Thus, it seems likely that dephosphorylation of the MAP kinases is vital for their control.[2] These kinases have a diverse array of substrates with important functions that result in their substantial regulatory impact. The ERK/MAP kinase cascade displays not only downstream but also upstream interactions as well as cross talk with other signaling pathways, which fine-tunes the cascade in a cell type-specific fashion. Transforming agents utilize this cascade in inducing cell proliferation.[3]

References:

1. Cobb, M.H.: Semin Cancer Biol. 5:261, 1994.
2. Theodosiou, A. & Ashworth, A.: Genome Biology 3:1, 2002.
3. Girault, J. A. et al.: Curr Opin Pharmacol. 7:77, 2007.

TECHNICAL INFORMATION

Source: Anti-Erk2 is a mouse monoclonal antibody raised against *E. coli*-expressed recombinant human Erk2 protein.

Specificity and Sensitivity: Anti-Erk2 specifically detects Erk2 protein and does not cross-react with Erk1. The molecular weight of detected Erk2 is 42 kDa. Anti-Erk2 reacts with human, mouse, & rat Erk2.

Storage Buffer: 0.1 M PBS (pH 7.2), 0.1% glycine, 0.1% sodium azide, 0.1% BSA, 50% glycerol.

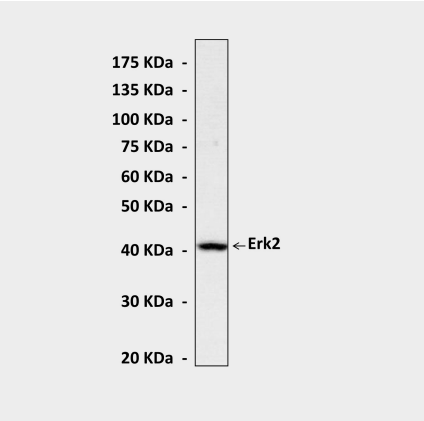
Storage: Store at -20°C, 4°C for frequent use. Avoid repeated freeze-thaw cycles.

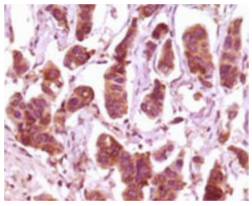
APPLICATIONS

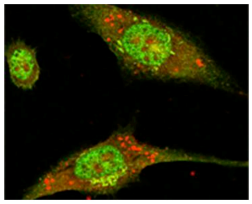
Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	n/d
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA







Top: Specific detection of ERK2 proteins from A431 cell lysate in Western blot analysis using ERK2 Monoclonal Antibody (38H10). **Middle:** Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Erk2 Antibody. **Bottom:** Immunofluorescent analysis of Eca-109 cells using Erk2 Antibody (green).