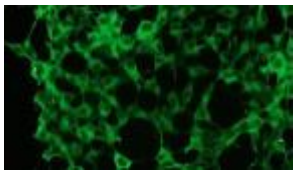
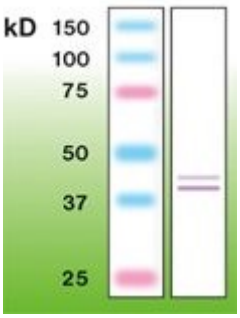
Product name:	p44/p42 MAPK ERK1/ERK2
Cat number:	MAB-94370
Size:	100 ug
Clone:	20G11
Concentration:	1mg/ml
Host:	Rb
Isotype:	IgG
Reactivity:	Hu, Ms, Rt
Applications:	Western blotting 1:1000 Immunoprecipitation 1:50 Immnohistochemistry (Frozen Tissues) Immunofluorescence(IF-ICC): 1:100 Antirabbit secondary antibodies must be used to detect this antibody
Molecular Weight:	42, 44 kDa
Purification:	Aff. Pur
Form:	Liquid
Buffer:	Supplied in 20 mM Tris HCl, (pH 8), 10 mg/ml BSA, 0.05%Sodium azide
Storage:	Store at –20°C. Avoid Freeze and Thaw cycles.

Background:

Mitogen-activated protein kinases (MAPKs) are a widely conserved family of serine/threonine protein kinases involved in many cellular programs such as cell proliferation, differentiation, motility, and death. The p44/42 MAPK (ERK1/2) signaling pathway can be activated in response to a diverse range of extracellular stimuli including mitogens, growth factors, and cytokines (1-3) and is an important target in the diagnosis and treatment of cancer (4). Upon stimulation, a sequential three-part protein kinase cascade is initiated, consisting of a MAP kinase kinase kinase (MAPKKK or MAP3K), a MAP kinase kinase (MAPKK or MAP2K), and a MAP kinase (MAPK). Multiple p44/42 MAP3Ks have been identified, including members of the Raf family as well as Mos and Tpl2/Cot. MEK1 and MEK2 are the primary MAPKKs in this pathway (5,6). MEK1 and MEK2 activate p44 and p42 through phosphorylation of activation loop residues Thr202/Tyr204 and Thr185/Tyr187, respectively. Several downstream targets of p44/42 have been identified, including p90RSK (7) and the transcription factor Elk-1 (8,9). p44/42 are negatively regulated by a fam¬ily of dual-specificity (Thr/yr) MAPK phosphatases, known as DUSPs or MKPs (10), along with MEK inhibitors such as U0126 and PD98059.
Specificity/Sensitivity:p44/42 MAP Kinase (20G11) Rabbit mAb detects endogenous levels of total p44/42 MAP kinase (Erk1/Erk2) protein. The antibody does not cross-react with JNK/SAPK or p38 MAP kinase.
Source/Purification:Monoclonal antibody is produced by immunizing animals with a synthetic peptide correspond¬ing to residues near the C-terminus of rat p44 MAP kinase



Immunofluorescence of Erk1,2 expression in HEK293 cells, visualized with rabbit anti-Erk1,2 Monoclonal Primary antibody dilution -1:100.



Western blot of Erk 1,2 in rat brain crude lysate (100µg of protein loaded).