

## Product datasheet

# FITC Anti-MEK1 + MEK2 (phospho S221) antibody [MEK12S221-D3] ab278753

Recombinant

[2 Images](#)

### Overview

<b>Product name</b>	FITC Anti-MEK1 + MEK2 (phospho S221) antibody [MEK12S221-D3]
<b>Description</b>	FITC Rabbit monoclonal [MEK12S221-D3] to MEK1 + MEK2 (phospho S221)
<b>Host species</b>	Rabbit
<b>Conjugation</b>	FITC. Ex: 493nm, Em: 528nm
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide within Human MEK1 + MEK2 (phospho S221). The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please <b><a href="#">contact</a></b> our Scientific Support team to discuss your requirements. Uniprot Q02750/ P36507 Database link: <b><a href="#">Q02750</a></b> <a href="#">Run BLAST with</a> <a href="#">Run BLAST with</a>
<b>Positive control</b>	Flow cyt: HeLa cells treated with pervanadate.
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> For more information <b><a href="#">see here</a></b> .

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Store In the Dark.
<b>Storage buffer</b>	Preservative: 0.09% Sodium azide Constituents: 99.71% PBS, 0.2% BSA
<b>Purity</b>	Protein A/G purified
<b>Clonality</b>	Monoclonal

<b>Clone number</b>	MEK12S221-D3
<b>Isotype</b>	IgG
<b>Light chain type</b>	kappa

## Applications

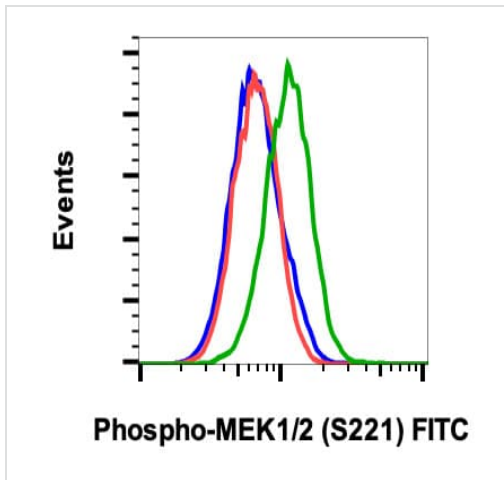
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab278753 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use 5µl for 10 <sup>6</sup> cells.

## Target

<b>Function</b>	Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Binding of extracellular ligands such as growth factors, cytokines and hormones to their cell-surface receptors activates RAS and this initiates RAF1 activation. RAF1 then further activates the dual-specificity protein kinases MAP2K1/MEK1 and MAP2K2/MEK2. Both MAP2K1/MEK1 and MAP2K2/MEK2 function specifically in the MAPK/ERK cascade, and catalyze the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in the extracellular signal-regulated kinases MAPK3/ERK1 and MAPK1/ERK2, leading to their activation and further transduction of the signal within the MAPK/ERK cascade. Depending on the cellular context, this pathway mediates diverse biological functions such as cell growth, adhesion, survival and differentiation, predominantly through the regulation of transcription, metabolism and cytoskeletal rearrangements. One target of the MAPK/ERK cascade is peroxisome proliferator-activated receptor gamma (PPARG), a nuclear receptor that promotes differentiation and apoptosis. MAP2K1/MEK1 has been shown to export PPARG from the nucleus. The MAPK/ERK cascade is also involved in the regulation of endosomal dynamics, including lysosome processing and endosome cycling through the perinuclear recycling compartment (PNRC), as well as in the fragmentation of the Golgi apparatus during mitosis.
<b>Tissue specificity</b>	Widely expressed, with extremely low levels in brain.
<b>Involvement in disease</b>	Cardiofaciocutaneous syndrome 3
<b>Sequence similarities</b>	Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily. Contains 1 protein kinase domain.
<b>Domain</b>	The proline-rich region localized between residues 270 and 307 is important for binding to RAF1 and activation of MAP2K1/MEK1.
<b>Post-translational modifications</b>	Phosphorylation at Ser-218 and Ser-222 by MAP kinase kinase kinases (RAF or MEKK1) positively regulates kinase activity. Also phosphorylated at Thr-292 by MAPK1/ERK2 and at Ser-298 by PAK. MAPK1/ERK2 phosphorylation of Thr-292 occurs in response to cellular adhesion and leads to inhibition of Ser-298 phosphorylation by PAK. Acetylation by Yersinia yopJ prevents phosphorylation and activation, thus blocking the MAPK signaling pathway.
<b>Cellular localization</b>	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center, spindle pole body. Cytoplasm. Nucleus. Localizes at centrosomes





## Images



Flow cytometric analysis of HeLa cells treated with imatinib and unstained as negative control (blue) or treated with imatinib (red) or with pervanadate (green) and stained using ab278753.

Flow Cytometry - FITC Anti-MEK1 + MEK2  
(phospho S221) antibody [MEK12S221-D3]  
(ab278753)

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

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**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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