

## Product datasheet

### Anti-Ras antibody [4F3] ab55391

★★★★☆ [11 Abreviews](#) [36 References](#) [2 Images](#)

#### Overview

<b>Product name</b>	Anti-Ras antibody [4F3]
<b>Description</b>	Mouse monoclonal [4F3] to Ras
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> WB, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Recombinant fragment (GST-tag) corresponding to Human Ras aa 16-125. Sequence:  KSALTIQLIQNHFVDEYDPTIEDSYRKQVVIDGETCLLDILDT AGQEEYS AMRDQYMRTGEGFLCVFAINNTKSFEDIHHYREQIKRVKD SEDVPMVLVG NKCDLPSTV

Database link: [P01116](#)

 [Run BLAST with](#)

 [Run BLAST with](#)

#### General notes

This product was changed from ascites to tissue culture supernatant on 13<sup>th</sup> Feb 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.40 Constituent: 100% PBS

<b>Purity</b>	Tissue culture supernatant
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	4F3
<b>Isotype</b>	IgG2a
<b>Light chain type</b>	kappa

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab55391 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
<b>WB</b>	★★★★★ (7)	Use at an assay dependent concentration. Predicted molecular weight: 22 kDa.
<b>Flow Cyt</b>		Use at an assay dependent concentration. <b>ab170191</b> - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

## Target

<b>Function</b>	Ras proteins bind GDP/GTP and possess intrinsic GTPase activity.
<b>Involvement in disease</b>	<p>Defects in HRAS are the cause of faciocutaneoskeletal syndrome (FCSS) [MIM:218040]. A rare condition characterized by prenatally increased growth, postnatal growth deficiency, mental retardation, distinctive facial appearance, cardiovascular abnormalities (typically pulmonic stenosis, hypertrophic cardiomyopathy and/or atrial tachycardia), tumor predisposition, skin and musculoskeletal abnormalities.</p> <p>Defects in HRAS are the cause of congenital myopathy with excess of muscle spindles (CMEMS) [MIM:218040]. CMEMS is a variant of Costello syndrome.</p> <p>Defects in HRAS may be a cause of susceptibility to Hurthle cell thyroid carcinoma (HCTC) [MIM:607464]. Hurthle cell thyroid carcinoma accounts for approximately 3% of all thyroid cancers. Although they are classified as variants of follicular neoplasms, they are more often multifocal and somewhat more aggressive and are less likely to take up iodine than are other follicular neoplasms.</p> <p>Note=Mutations which change positions 12, 13 or 61 activate the potential of HRAS to transform cultured cells and are implicated in a variety of human tumors.</p> <p>Defects in HRAS are a cause of susceptibility to bladder cancer (BLC) [MIM:109800]. A malignancy originating in tissues of the urinary bladder. It often presents with multiple tumors appearing at different times and at different sites in the bladder. Most bladder cancers are transitional cell carcinomas. They begin in cells that normally make up the inner lining of the bladder. Other types of bladder cancer include squamous cell carcinoma (cancer that begins in thin, flat cells) and adenocarcinoma (cancer that begins in cells that make and release mucus and other fluids). Bladder cancer is a complex disorder with both genetic and environmental influences.</p> <p>Note=Defects in HRAS are the cause of oral squamous cell carcinoma (OSCC).</p>
<b>Sequence similarities</b>	Belongs to the small GTPase superfamily. Ras family.

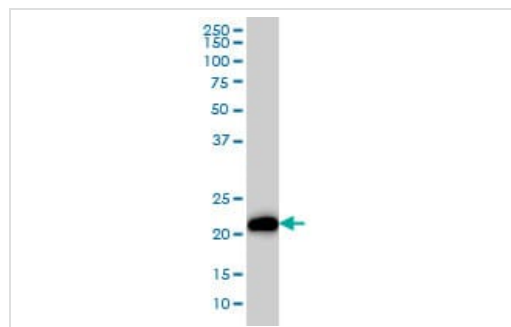
## Post-translational modifications

Palmitoylated by the ZDHHC9-GOLGA7 complex. A continuous cycle of de- and re-palmitoylation regulates rapid exchange between plasma membrane and Golgi.  
S-nitrosylated; critical for redox regulation. Important for stimulating guanine nucleotide exchange.  
No structural perturbation on nitrosylation.

## Cellular localization

Cell membrane. Golgi apparatus membrane. The active GTP-bound form is localized most strongly to membranes than the inactive GDP-bound form (By similarity). Shuttles between the plasma membrane and the Golgi apparatus.

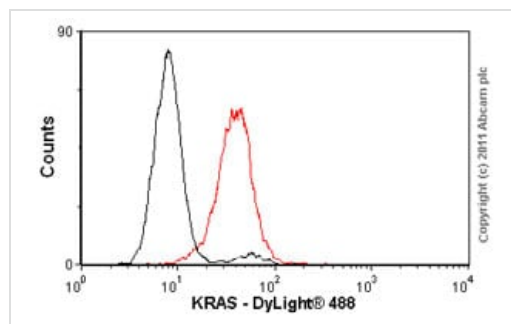
## Images



Western blot - Anti-Ras antibody [4F3] (ab55391)

cK Ras antibody (ab55391) at 1ug/lane + HeLa cell lysate at 25ug/lane.

This image was generated using the ascites version of the product.



Flow Cytometry - Anti-Ras antibody [4F3] (ab55391)

Overlay histogram showing HeLa cells stained with ab55391 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab55391, 1µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] ([ab91361](#), 1µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a slightly decreased signal in HeLa cells fixed with methanol (5 min)/permeabilized with 0.1% PBS-Tween 20 used under the same conditions.

This image was generated using the ascites version of the product.

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