abcam

Product datasheet

Anti-Ras (mutated G12D) antibody ab221163

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Overview

Product name	Anti-Ras (mutated G12D) antibody
Description	Rabbit polyclonal to Ras (mutated G12D)
Host species	Rabbit
Specificity	G12D mutant specific.
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Chicken, Guinea pig, Cow, Dog, Pig, Xenopus laevis, Zebrafish
Immunogen	Synthetic peptide corresponding to Human Ras (N terminal) (mutated G12D). (Carrier-protein conjugated). Database link: **P01111**
Positive control	Human colon cancer tissue; AsPC-1 whole cell extract; Ras (mutant G12D) transfected 293T whole cell extracts.
General notes	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

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 78% PBS, 1% BSA, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab221163 in the following tested applications.

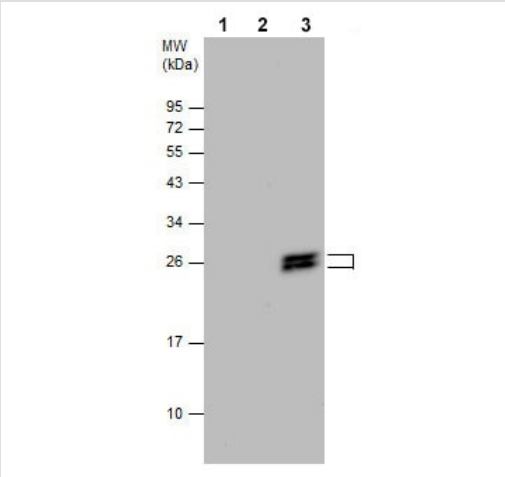
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/10000. Predicted molecular weight: 21 kDa.
IHC-P	★☆☆☆☆ (1)	1/100 - 1/1000.

Target

Function	Ras proteins bind GDP/GTP and possess intrinsic GTPase activity.
Involvement in disease	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. Defects in HRAS are the cause of congenital myopathy with excess of muscle spindles (CMEMS) [MIM:218040]. CMEMS is a variant of Costello syndrome. 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. 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. 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. Note=Defects in HRAS are the cause of oral squamous cell carcinoma (OSCC).
Sequence similarities	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 (mutated G12D) antibody (ab221163)

All lanes : Anti-Ras (mutated G12D) antibody (ab221163) at 1/5000 dilution

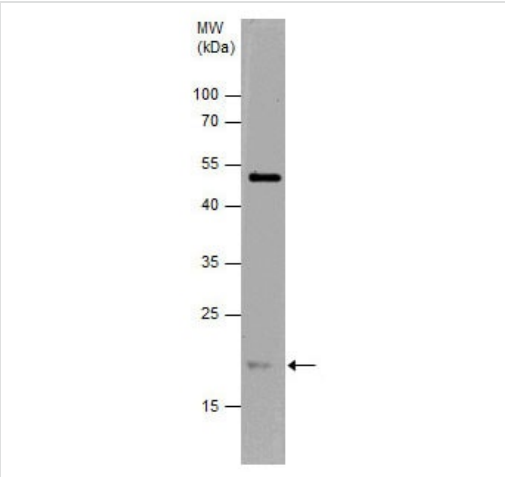
Lane 1 : Non-transfected 293T whole cell extract
Lane 2 : Ras wild type transfected 293T whole cell extract
Lane 3 : Ras mutated G12D transfected 293T whole cell extract

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 21 kDa

12% SDS-PAGE.



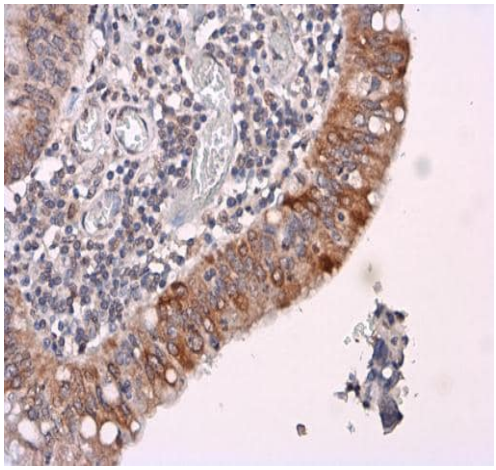
Western blot - Anti-Ras (mutated G12D) antibody (ab221163)

Anti-Ras (mutated G12D) antibody (ab221163) at 1/500 dilution + AsPC-1 whole cell extract at 30 µg

Secondary
HRP-conjugated anti-rabbit IgG antibody

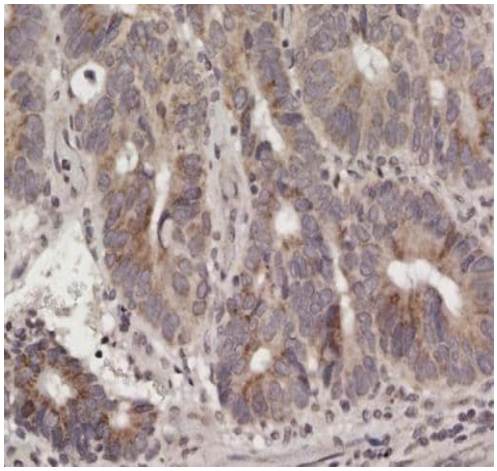
Predicted band size: 21 kDa

12% SDS-PAGE.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ras (mutated G12D) antibody (ab221163)

Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling Ras (mutated G12D) with ab221163 at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ras (mutated G12D) antibody (ab221163)

Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling Ras (mutated G12D) with ab221163 at 1/1000 dilution.

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