

**Rabbit Anti-RAS (G12D Mutant Specific) Polyclonal: RC0181**

**Intended Use:** For Research Use Only

**Description:** The guanine-nucleotide binding protein (K-Ras, H-Ras, and N-Ras) is 21 kDa membrane-associated GTPase which cycles between active (GTP-bound) and inactive (GDP-bound) forms, regulates cell proliferation, differentiation, and survival. Receptor tyrosine kinases and G protein-coupled receptors activate Ras, which then stimulates the Raf-MEK-MAPK pathway. GTPase-activating proteins (GAP) normally facilitate the inactivation of Ras. However, studies show that in 30% of human cancers, point mutations in Ras prevent the GAP-mediated inhibition of this pathway. The most common oncogenic Ras mutation is Gly12 to Asp12 (G12D) – Ras missense mutations at the codon 12, which results in decreased GTPase activity and constitutive signaling, possibly by increasing the overall rigidity of the protein.

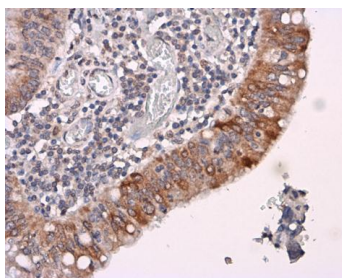
**Specifications:**

Clone: Polyclonal  
 Source: Rabbit  
 Isotype: IgG  
 Reactivity: Human  
 Localization: Membrane  
 Formulation: Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)  
 Storage: Store at 2°- 8°C  
 Applications: IHC, WB  
 Package:

Description	Catalog No.	Size
RAS (G12D Mutant Specific) Concentrated	RC0181	1 ml

**IHC Procedure\*:**

Positive Control Tissue: Human colon cancer, Ras (G12D Mutant specific)-transfected 293T whole cell extracts  
 Concentrated Dilution: 25-100  
 Pretreatment: Citrate pH6.0 or EDTA pH8.0 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual  
 \* Result should be confirmed by an established diagnostic procedure.



FFPE human colon cancer tissue stained with anti- RAS (G12D Mutant Specific) using DAB

**References:**

1. Expressions of ABCG2, CD133, and Podoplanin in Salivary Adenoid Cystic Carcinoma. Li W, et al. Biomed Res Int. 132349, 2014.
2. CES2, ABCG2, TS and Topo-I primary and synchronous metastasis expression and clinical outcome in metastatic colorectal cancer patients treated with first-line FOLFIRI regimen. Silvestris N, et al. Int J Mol Sci 15:15767-77, 2014.
3. In vitro drug response and efflux transporters associated with drug resistance in pediatric high grade glioma and diffuse intrinsic pontine glioma. Veringa SJ, et al. PLoS One 8:e61512, 2013.
4. Neoadjuvant chemotherapy induces expression levels of breast cancer resistance protein that predict disease-free survival in breast cancer. Kim B, et al. PLoS One 8:e62766, 2013.

Doc. 100-RC0181  
Rev. A