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DATA SHEET

Rabbit Anti-RAS (G12D Mutant Specific) [HL10]: RM0146-0.1ML

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. KRAS has the distinction of being a preeminent oncoprotein as it is mutated in more than 85% of RAS-altered cancers. This recombinant clone [HL10] demonstrates exceptional specificity for the RAS G12D mutant protein.

Specifications:

Clone:	HL10
Source:	Rabbit
Isotype:	IgG
Reactivity:	Human, mouse
Immunogen:	Synthetic peptide of human K-Ras mutant G12D
Localization:	Membrane
Formulation:	Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)
Storage:	Store at 2°- 8°C
Applications:	IHC, ICC/IF, WB

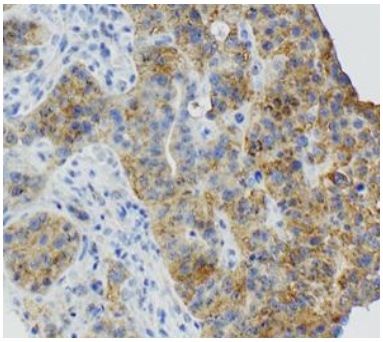
Package:

Description	Catalog No.	Size
RAS (G12D Mutant Specific) Concentrated	RM0146-0.1ML	0.1 ml

IHC Procedure*:

Positive Control Tissue:	Human colon cancer, Ras (G12D Mutant specific)-transfected 293T whole cell extracts
Concentrated Dilution:	25-100
Pretreatment:	Tris EDTA pH9.0 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp:	Overnight @ 4°C
Detection:	Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE KPC B16 mouse pancreatic tumor stained with anti-RAS (G12D) 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.

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