abcam

Product datasheet

Recombinant human Ret (mutated V804M) protein ab186463

2 Images

Description

Product name	Recombinant human Ret (mutated V804M) protein
Biological activity	The specific activity of ab186463 was determined to be 180 nmol/min/mg as per activity assay protocol.
Purity	> 90 % Densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	P07949-2
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	HCYHKFAHKPPIS SAEMTFRRPA QAFPVSYSSS GARRPSLDSM ENQVSVDAFK ILEDPKWEFP RKNLVLGKTL GEGEFGKVVK ATAFHLKGRA GYTTVAVKML KENASPSELR DLLSEFNVLK QVNHPHVIKL YGACSQDGPL LLIMEYAKYG SLRGFLRESR KVGPGYLGSG GSRNSSSLDH PDERALTMGD LISFAWQISQ GMQYLAEMKL VHRDLAARNI LVAEGRKMKI SDFGLSRDVY EEDSYVKRSQ GRIPVKWMAI ESLFDHIYTT QSDVWSFGVL LWEIVTLGGN PYPGIPPERL FNLLKTGHRM ERPDNCSEEM YRLMLQCWKQ EPDKRPVFAD ISKDLEKMMV KRRDYLDLAA STPSDSLIYD DGLSEEETPL VDCNNAPLPR ALPSTWIENK LYGRISHAFT RF
Predicted molecular weight	74 kDa including tags
Amino acids	658 to 1072
Modifications	mutated V804M
Tags	proprietary tag N-Terminus
Additional sequence information	NM_020630.

Specifications

Our **Abpromise guarantee** covers the use of **ab186463** in the following tested applications.

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

Applications	SDS-PAGE Functional Studies
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 7.50 Constituents: 0.79% Tris HCl, 0.88% Sodium chloride, 0.31% Glutathione, 0.003% EDTA, 0.004% DTT, 0.002% PMSF, 25% Glycerol (glycerin, glycerine) This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function	Probable receptor with tyrosine-protein kinase activity; important for development.
Involvement in disease	Defects in RET may be a cause of colorectal cancer (CRC) [MIM:114500]. Defects in RET are a cause of Hirschsprung disease (HSCR) [MIM:142623]. HSCR is a genetic disorder of neural crest development characterized by the absence of intramural ganglion cells in the hindgut, often resulting in intestinal obstruction. Occasionally, MEN2A or FMTC occur in association with HSCR. Defects in RET are the cause of medullary thyroid carcinoma (MTC) [MIM:155240]. MTC is a rare tumor derived from the C cells of the thyroid. Three hereditary forms are known, that are transmitted in an autosomal dominant fashion: (a) multiple neoplasia type 2A (MEN2A), (b) multiple neoplasia type IIB (MEN2B) and (c) familial MTC (FMTC), which occurs in 25-30% of MTC cases and where MTC is the only clinical manifestation. Defects in RET are the cause of multiple neoplasia type 2B (MEN2B) [MIM:162300]. MEN2B is an uncommon inherited cancer syndrome characterized by predisposition to MTC and phaeochromocytoma which is associated with marfanoid habitus, mucosal neuromas, skeletal and ophtalmic abnormalities, and ganglioneuromas of the intestine tract. Then the disease progresses rapidly with the development of metastatic MTC and a pheochromocytome in 50% of cases. Defects in RET are a cause of susceptibility to pheochromocytoma (PCC) [MIM:171300]. A catecholamine-producing tumor of chromaffin tissue of the adrenal medulla or sympathetic paraganglia. The cardinal symptom, reflecting the increased secretion of epinephrine and norepinephrine, is hypertension, which may be persistent or intermittent. Defects in RET are the cause of multiple neoplasia type 2A (MEN2A) [MIM:171400]; also known as multiple neoplasia type 2 (MEN2). MEN2A is the most frequent form of medullary thyroid cancer (MTC). It is an inherited cancer syndrome characterized by MTC, phaeochromocytoma and/or hyperparathyroidism. Defects in RET are a cause of thyroid papillary carcinoma (TPC) [MIM:188550]. TPC is a common tumor of the thyroid that typically arises as an irregular, solid or cystic mass from otherwise normal thyroid tissue. Papillary carcinomas are malignant neoplasm characterized by the formation of numerous, irregular, finger-like projections of fibrous stroma that is covered with a surface layer of neoplastic epithelial cells. Note=Chromosomal aberrations involving RET are

found in thyroid papillary carcinomas. Inversion inv(10)(q11.2;q21) generates the RET/CCDC6 (PTC1) oncogene; inversion inv(10)(q11.2;q11.2) generates the RET/NCOA4 (PTC3) oncogene; translocation t(10;14)(q11;q32) with GOLGA5 generates the RET/GOLGA5 (PTC5) oncogene; translocation t(8;10)(p21.3;q11.2) with PCM1 generates the PCM1/RET fusion; translocation t(6;10)(p21.3;q11.2) with RFP generates the Delta RFP/RET oncogene; translocation t(1;10)(p13;q11) with TRIM33 generates the TRIM33/RET (PTC7) oncogene; translocation t(7;10)(q32;q11) with TRIM24/TIF1 generates the TRIM24/RET (PTC6) oncogene. The PTC5 oncogene has been found in 2 cases of PACT in children exposed to radioactive fallout after Chernobyl. A chromosomal aberration involving TRIM27/RFP is found in thyroid papillary carcinomas. Translocation t(6;10)(p21.3;q11.2) with RET. The translocation generates TRIM27/RET and delta TRIM27/RET oncogenes.
Defects in RET are a cause of renal adysplasia (RADYS) [MIM:191830]; also known as renal agenesis or renal aplasia. Renal agenesis refers to the absence of one (unilateral) or both (bilateral) kidneys at birth. Bilateral renal agenesis belongs to a group of perinatally lethal renal diseases, including severe bilateral renal dysplasia, unilateral renal agenesis with contralateral dysplasia and severe obstructive uropathy.
Defects in RET are a cause of congenital central hypoventilation syndrome (CCHS) [MIM:209880]; also known as congenital failure of autonomic control or Ondine curse. CCHS is a rare disorder characterized by abnormal control of respiration in the absence of neuromuscular or lung disease, or an identifiable brain stem lesion. A deficiency in autonomic control of respiration results in inadequate or negligible ventilatory and arousal responses to hypercapnia and hypoxemia.

Sequence similarities

Belongs to the protein kinase superfamily. Tyr protein kinase family.
Contains 1 cadherin domain.
Contains 1 protein kinase domain.

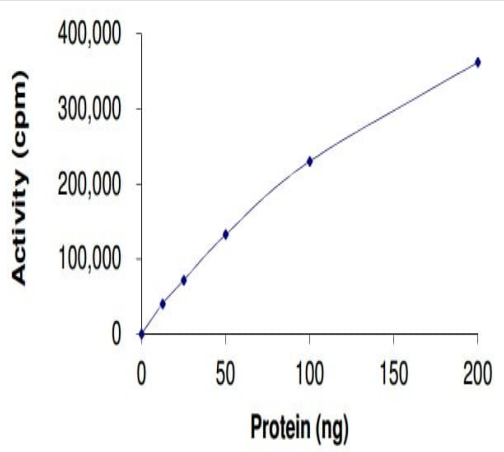
Post-translational modifications

Autophosphorylated on C-terminal tyrosine residues upon ligand stimulation. Dephosphorylated by PTPRJ on Tyr-905, Tyr-1015 and Tyr-1062.

Cellular localization

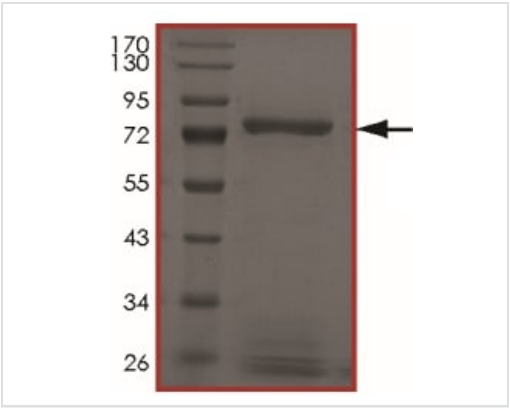
Membrane.

Images



Functional Studies - Recombinant human Ret (mutated V804M) protein (ab186463)

Kinase Assay demonstrating specific activity of ab186463.



SDS-PAGE - Recombinant human Ret (mutated V804M) protein (ab186463)

SDS-PAGE analysis of ab186463.

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