

## ProQinase™ RET G810S

ret proto-oncogene

Recombinant Human Active Protein Kinase

HGNC Symbol: RET

**Synonyms:** CDHF12, CDHR16, HSCR1, MEN2A, MEN2B, MTC1, PTC, RET51, RET-ELE1

**Product No.:** 1726-0000-1

**Lot:** 002

**Description:** Human RET G810S, C-terminal fragment, amino acids H<sub>658</sub>-S<sub>1114</sub> (as in [NCBI/Protein](#) entry NP\_066124.1) with a G810S mutation, N-terminal GST-HIS<sub>6</sub> fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

**Product identity:** RET G810S Lot 002, was confirmed as RET by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW<sub>Fusion Protein</sub>:** 80,534 Da

**Expression host:** Sf9 insect cells

**Purification:** GST-Affinity Chromatography

**Activation:** This kinase was not activated by special procedures

**Storage buffer:** 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20 % glycerol

**Storage temperature:** -80°C

For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

**Protein concentration:** 0.119 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

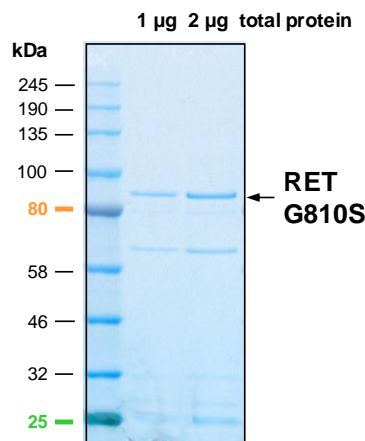
### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 8.6 pmol/µg × min  
ATP-K<sub>M</sub>: 2.3 µM

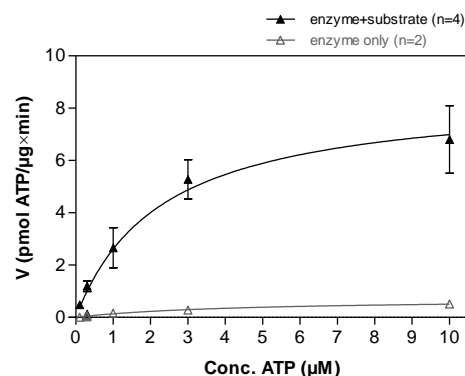
### Additional assay technology:

RET G810S Lot 002 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

### RET G810S Lot 002: Coomassie stain



### RET G810S Lot 002: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



- Assay conditions:  
60 mM HEPES-NaOH, pH 7.5  
3 mM MgCl<sub>2</sub>  
3 mM MnCl<sub>2</sub>  
3 µM Na-orthovanadate  
1.2 mM DTT  
50 µg/ml PEG<sub>20,000</sub>  
ATP (variable)  
Substrate: TRK-C derived peptide 5 µg/ml  
Kinase: 4 µg/ml
- Filter binding assay  
MSIP membrane (Millipore)

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GST-RET G810S Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPIQID	KYLKSSKYIA	WPLQGWAQTF	GGGDHPPKSD	PMG <b>HHHHHG</b>	RDS <b>LEVLFQG</b>	240
241	<b>PLAMGARGRH</b>	<b>CYHKFAHKPP</b>	<b>ISSAEMTFRR</b>	<b>PAQAFPVSYS</b>	<b>SSGARRPSLD</b>	<b>SMENQVSVDA</b>	300
301	<b>FKILEDPKWE</b>	<b>FPRKNLVLGK</b>	<b>TLGEGEFGKV</b>	<b>VKATAFHLKG</b>	<b>RAGYTTVAVK</b>	<b>MLKENASPSE</b>	360
361	<b>LRDLLSEFNV</b>	<b>LKQVNHPHVI</b>	<b>KLYGACSQDG</b>	<b>PLLLLIVEYAK</b>	<b>YSLRGFLRE</b>	<b>SRKVGPGYLG</b>	420
421	<b>SGGSRNSSSL</b>	<b>DHPDERALTM</b>	<b>GDLISFAWQI</b>	<b>SQGMQYLAEM</b>	<b>KLVHRDLAAR</b>	<b>NILVAEGRKM</b>	480
481	<b>KISDFGLSRD</b>	<b>VYEEDSYVKR</b>	<b>SQGRIPVKWM</b>	<b>AIESLFDHIY</b>	<b>TTQSDVWSFG</b>	<b>VLLWEIVTLG</b>	540
541	<b>GNPYPGIPPE</b>	<b>RLFNLLKTGH</b>	<b>RMERPDNCSE</b>	<b>EMYRLMLQCW</b>	<b>KQEPDKRPVF</b>	<b>ADISKDLEKM</b>	600
601	<b>MVKRRDYLDL</b>	<b>AASTPSDSL</b>	<b>YDDGLSEET</b>	<b>PLVDCNNAPL</b>	<b>PRALPSTWIE</b>	<b>NKLYGMSDPN</b>	660
661	<b>WPGESPVPLT</b>	<b>RADGTNTGFP</b>	<b>RYPNDSVYAN</b>	<b>WMLSPSAAKL</b>	<b>MDTFDS</b>		720

1-218: GST **Red**: HIS6-tag **Green**: 3C cleavage site **blue**: RET fragment **boxed**: G810S mutation

RET wt <sup>1</sup> Amino Acid Sequence							
1	MAKATSGAAG	LRLLLLLLLP	LLGKVALGLY	FSRDAYWEKL	YVDQAAGTPL	LYVHALRDAP	60
61	EEVPSFRLGQ	HLYGTYRTRL	HENNWICIQE	DTGLLYLNRS	LDHSSWEKLS	VRNRGFPLLT	120
121	VYLKVFLSPT	SLREGECQWP	GCARVYFSFF	NTSFPACSSL	KPRELCFPET	RPSFRIENR	180
181	PPGTFHQFRL	LPVQFLCPNI	SVAYRLLEGE	GLPFRCAPDS	LEVSTRWALD	REQREKYELV	240
241	AVCTVHAGAR	EEVVMVPPFV	TVYDEDDSA	TFPAGVDTAS	AVVEFKRKED	TVVATLRVFD	300
301	ADVVPASGEL	VRRYTSTLLP	GDTWAQQTFR	VEHWPNETSV	QANGSFVRAT	VHDYRLVLNR	360
361	NLSISENRTM	QLAVLVNDS	FQGPAGVLL	LHFNVSVPV	SLHLPSTYSL	SVSRRARRFA	420
421	QIGKVCVENC	QAFSGINVQY	KLHSSGANCS	TLGVVTS AED	TSGILFVNDT	KALRRPKCAE	480
481	LHYMVVATDQ	QTSRQAQAQL	LVTVEGSYVA	EEAGCPLSCA	VSKRRLECEE	CGGLGSP TGR	540
541	CEWRQGDGKG	ITRNFSTCSP	STKTCPDGHC	DVVETQDINI	CPQDCLRGS	VGGHEPGEPR	600
600	GIKAGYGTGN	CFPEEEKCFC	EPEDIQDPLC	DEL CRTVIAA	AVLFSFIVSV	LLSAFCI <b>HCY</b>	660
661	<b>HKFAHKPPIS</b>	<b>SAEMTFRRPA</b>	<b>QAFPVSYS</b>	<b>GARRPSLDSM</b>	<b>ENQVSVDAFK</b>	<b>ILEDPKWEFP</b>	720
721	<b>RKNLVLGKTL</b>	<b>GEGEFGKVVK</b>	<b>ATAFHLKGRA</b>	<b>GYTTVAVKML</b>	<b>KENASPSELR</b>	<b>DLLSEFNVLK</b>	780
781	<b>QVNHPhVIKL</b>	<b>YGACSQDGPL</b>	<b>LLIVEYAKYG</b>	<b>SLRGFLRESR</b>	<b>KVGPYLGSG</b>	<b>GSRNSSSLDH</b>	840
841	<b>PDERALTMGD</b>	<b>LISFAWQISQ</b>	<b>GMQYLAEMKL</b>	<b>VHRDLAARNI</b>	<b>LVAEGRKMKI</b>	<b>SDFGLSRD VY</b>	900
901	<b>EEDSYVKRSQ</b>	<b>GRIPVKWMAI</b>	<b>ESLFDHIYTT</b>	<b>QSDVWSFGVL</b>	<b>LWEIVTLGGN</b>	<b>PYPGIPPERL</b>	960
961	<b>FNLLKTGHRM</b>	<b>ERPDCNSEEM</b>	<b>YRLMLQCWKQ</b>	<b>EPDKRPVFAD</b>	<b>ISKDLEKMMV</b>	<b>KRRDYLDLAA</b>	1020
1021	<b>STPSDSL IYD</b>	<b>DGLSEETPL</b>	<b>VDCNNAPLPR</b>	<b>ALPSTWIENK</b>	<b>LYGMSDPNWP</b>	<b>GESPVPLTRA</b>	1080
1081	<b>DGTNTGFPRY</b>	<b>PNSVYANWM</b>	<b>LSPSAAKLMD</b>	<b>TFDS</b>			1140

**blue**: RET sequence expressed in recombinant protein **Red**: variant in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_066124.1