

## Active Recombinant Full Length Human LRRK2 Protein, G2019S mutant, Flag tagged

**Cat. No.** LRRK2-10HFL    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human, full length, G2019S mutant, DYKDDDDK-tagged, expressed in mammalian cells. No special measures were taken to activate this kinase.                                                                                                                                                                                                                                                                                            |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>           | Mammalian Cells                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>ProteinLength</b>    | 1-2527 aa                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | This gene is a member of the leucine-rich repeat kinase family and encodes a protein with an ankryin repeat region, a leucine-rich repeat (LRR) domain, a kinase domain, a DFG-like motif, a RAS domain, a GTPase domain, a MLK-like domain, and a WD40 domain. The protein is present largely in the cytoplasm but also associates with the mitochondrial outer membrane. Mutations in this gene have been associated with Parkinson disease-8. |
| <b>Form</b>             | 50 mM Tris (pH 7.5), 150 mM NaCl, 0.5 mM EDTA, 0.02 % Triton X-100, 2 mM DTT and 50 % Glycerol.                                                                                                                                                                                                                                                                                                                                                  |
| <b>Bio-activity</b>     | 73 nmoles of phosphate transferred to ERM (LRRKtide) peptide substrate (RLGRDKYKTLRQIRQ) per minute per mg of total protein at 30 centigrade. Activity determined at a final protein concentration of 2.08 µg/mL.                                                                                                                                                                                                                                |
| <b>AASequence</b>       | MDYKDDDDKITSLYKKAGTMASGSCQGCEEDEETLKKLIVRLNNVQEGKQIETLVQI                                                                                                                                                                                                                                                                                                                                                                                        |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA



LEDLLVFTYSEHASKLFQGKNIHVPLLIVLDSYMRVASVQQVGWSLLCKLIEVCPGTM  
QSLMGPQDVGNDWEVLGVHQLILKMLTVHNASVNLVIGLKTDLTLLTSGKITLLILDE  
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NFKDEEEIVLHVLHCLHSLAIPCNNVEVLMMSGNVRCYNIVVEAMKAFFPMSERIQEVSC  
CLLHRLTLGNFFNILVLNEVHEFVVKAVQQYPENAALQISALSCLALLTETIFLNQDLE  
EKNENQENDDEGEEDKLFWLEACYKALTWHRKNKHVQEAACWALNNLLMYQNSL  
HEKIGDEDGHFPAHREVMLSMLMHSSSKEVFQASANALSTLLEQNVNFRKILLSKGI  
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GIQKCGLKVISSIVHFPDALEMLSLEGAMDSVLHTLQMYPPDDQEIQCLGLSLIGYLITK  
KNVFIGTGHLAKILVSSLYRFKDVAEIQTGKFQTLAILKLSASF SKLLVHHSFDLVIFH  
QMSSNIMEQKDQQFLNLCKCFKAVAMDDYLKNVMLERACDQNN SIMVECLLLLGA  
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RLALDVANNISICLGGFCIGKVEPSWLGPLFPDKTSNLRKQTNIASTLARMVIRYQMK  
AVEEGTASGSDGNFSEDVLSKFDEWTFIPDSSMDSVFAQSDDL DSEGSEGSFLVKK  
KSNSISVGEFYRDAVLQRCSPNLQRHSNSLGPIFDHEDLLKRKRKILSSDDSLRSSKL  
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CPTLKQFNLSYNQLSFVPENLTDVVEKLEQLILEGNKISGICSPRLKELKILNLSKNHI  
SSLSENFLEACPKVESFSARMNFLAAMPFLPPSMTILKLSQNKFSCIPAILNPLHRS  
LDMSSNDIQYLP GPAHWKSLNLRELLFSHNQISILDSEKAYLWSRVEKLHLSHNK LK  
EIPPEIGCLENLTSLDVSYNLELRSFPNEMGKLSKIWDLP LDELHLNFD FKHIGCKAKD  
IIRFLQQRLKKAVPYNRMKLMIVGNTGSGKTTLLQQLMKTKKSDLGMQSATVGIDVK  
DWPIQIRDKRKRDVLNVWDFAGREEFYSTPHFMTQRALYLA VYDLSKGQAEVDA  
MKPWLFNIKARASSSPVILVGTHLDVSDEKQRKACMSKITKELLNKRGFPAIRDYHFV  
NATEESDALAKLRKTIINESLNFKIRDQLVVGQLIPDCYVELEKIILSERKNVPIEFVID  
RKRLQLVRENQLQLDENELPHAVHFLNESGVLLHFQDPALQLSDLYFVEPKWLCKI  
MAQILTVKVEGCPKHPKGIISRRDVEKFLSKKRKFPKNYMSQYFKLLEKFQIALPIGEE  
YLLVPSSLS DHRPVIELPHCENSEIIIRLYEMPYFPMGFW SRLINRLLEISPYMLSGRE  
RALRPNRMYWRQGIYLNWSPEAYCLVGSEVLDNHPESFLKITVPSCRKGCILLGQV

VDHIDSLMEEWFPGLLEIDICGEGETLLKKWALYSFNDGEEHQKILLDDLMKKAEEG  
 DLLVNPDPRLTIPISQIAPDLILADLPNIMLNNDLEFEQAPPELLGDGSFGSVYRA  
 AYEGEREAVKIFNKHTSLRLLRQELVVLCHLHHPISLLAAGIRPRMLVMELASKGS  
 LDRLLQQDKASLTRLQHRALHVDGLRYLHSAMIIYRDLKPHNVLLFTLYPNAAIIAK  
 IADYSIAQYCCRMGIKTSEGTGPFRAPEVARGNVIYNQQADVVSFGLLLYDILTTGGR  
 IVEGLKFPNEFDELEIQGKLDPVKEYGCAPWPMVEKLIKQCLKENPQERPTSAQVF  
 DILNSAELVCLTRRILLPKNVIVECMVATHHNSRNASIWLGCGHTRGQLSFLDLNTE  
 GYTSEEVADSRILCLALVHLPVEKESWIVSGTQSGTLLVINTEDGKKRHTLEKMTDSV  
 TCLYCNSFSKQSKQKNFLLVGTADGKLAIFEDKTVKLKGAAPLKILNIGNVSTPLMCL  
 SESTNSTERNVMWGGCGTKIFSFSNDFTIQKLIETRTSQLFSYAAFSDSNIITVVVDTA  
 LYIAKQNSPVVEVWDKKTEKLCGLIDCVHFLREVMVKENKESKHKMSYSGRVKTLCL  
 QKNTALWIGTGGGHILLDLSTRRLIRVIYNFCNSVRVMMTAQLGSLKNVMLVLGYN  
 RKNTEGTQKQKEIQSCLTVWDINLPHEVQNLEKHIEVRKELAEKMRRTSVE

**Purity** 85 % as determined by a SDS-PAGE gel stained with SimplyBlue SafeStain.

**Concentration** 0.40 mg/mL total protein as measured using the Bradford protein assay with BSAs as a standard. Calculated: 1,390 nM.

**Shipping** Dry ice

## GENE INFORMATION

**Gene Name** LRRK2 leucine-rich repeat kinase 2 [ Homo sapiens (human) ]

**Official Symbol** LRRK2

**Synonyms** LRRK2; leucine-rich repeat kinase 2; PARK8, Parkinson disease (autosomal dominant) 8; leucine-rich repeat serine/threonine-protein kinase 2; DKFZp434H2111; FLJ45829; RIPK7; ROCO2; augmented in rheumatoid arthritis 17; PARK8; AURA17;

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## DARDARIN

**Gene ID** 120892

**mRNA Refseq** NM\_198578

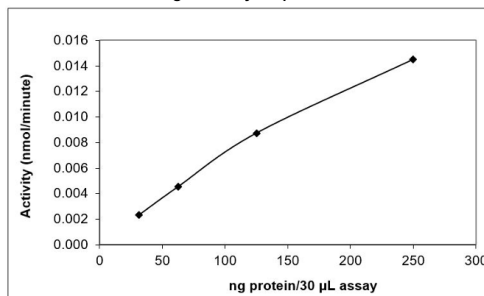
**Protein Refseq** NP\_940980

**MIM** 609007

**UniProt ID** Q5S007

## Activity

**LRRK2 G2019S Full Length Activity Graph**



**Dilution Buffer:**

20 mM Tris (pH 7.5), 0.02% Triton X-100, 0.1 mg/mL BSA, 2 mM DTT, 1 mM  $\text{Na}_2\text{VO}_4$  and 10% Glycerol.

**Assay Conditions:**

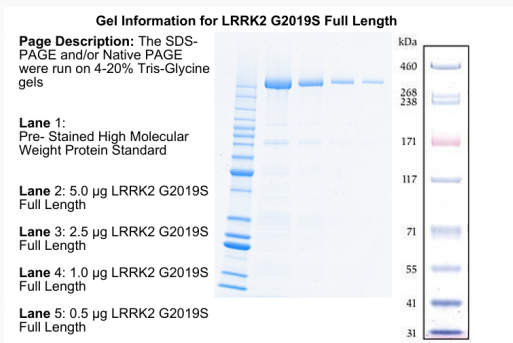
LRRK2 G2019S Full Length was pre-diluted in enzyme dilution buffer and assayed in 20 mM Tris (pH 7.5), 10 mM  $\text{MgCl}_2$ , 1 mM EGTA, 1 mM  $\text{Na}_2\text{VO}_4$ , 5 mM  $\beta$ -glycerophosphate, 2 mM DTT, 0.02% Triton X-100, 100  $\mu\text{M}$  ATP, 250  $\mu\text{M}$  ERM (LRRKtide) peptide substrate (RLGRDKYKTLRQIRQ) and trace [ $^{32}\text{P}$ ]- $\gamma$ -ATP for 10 minutes at 30°C.

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## SDS-PAGE



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