

Certificate of Analysis

DYRK3 , 10 µg

Dual-Specificity Tyrosine Phosphorylation Regulated Kinase 3, GST-tagged

ThermoFisher
SCIENTIFIC

Part Number: PV3837

Lot Number: 3040451A

Immediate Storage: -80°C

Shipping Conditions: dry ice

5781 Van Allen Way

Carlsbad, CA 92008

Phone: 760.603.7200

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Description:

Recombinant human full length protein, GST-tagged, expressed in insect cells. No special measures were taken to activate this kinase.

Specific Activity:

1,650 nmoles of phosphate transferred to DYRKtide peptide substrate (RRFRPASPLRGPPK) per minute per mg of total protein at 30°C. Activity determined at a final protein concentration of 0.83 µg/mL.

Concentration:

0.36 mg/mL total protein as measured using the Bradford protein assay with BSA as a standard.

Calculated **3,860 nM**.

Storage and Handling:

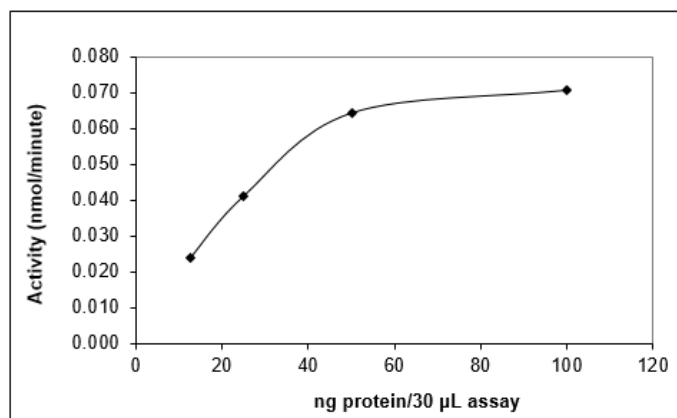
For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 20 µL are not recommended. **Please never store a kinase diluted.** If properly stored at -80°C, this product is guaranteed for 6 months from date of purchase.

Storage Buffer:

50 mM Tris (pH 7.5), 150 mM NaCl, 0.5 mM EDTA, 0.02% Triton® X-100, 2 mM DTT and 50% Glycerol.

QUALITY ASSURANCE

DYRK3 Activity Graph



Dilution Buffer:

20 mM Tris (pH 7.5), 0.02% Triton® X-100, 0.1 mg/mL BSA, 2 mM DTT, 0.5 mM Na₃VO₄ and 10% Glycerol.

Assay Conditions:

DYRK3 was pre-diluted in enzyme dilution buffer and assayed in 25 mM Tris (pH 7.5), 10 mM MgCl₂, 0.5 mM EGTA, 0.5 mM Na₃VO₄, 5 mM β-glycerophosphate, 2.5 mM DTT, 0.01% Triton® X-100, 200 µM ATP, 200000 µg/mL DYRKtide peptide substrate (RRFRPASPLRGPPK) and trace [³²P]-γ-ATP for 10 minutes at 30°C.

Gel Information for DYRK3

Page Description: The SDS-PAGE and/or Native PAGE were run on 4-20% Tris-Glycine Novex™ gels (Catalog #: EC6025BOX).

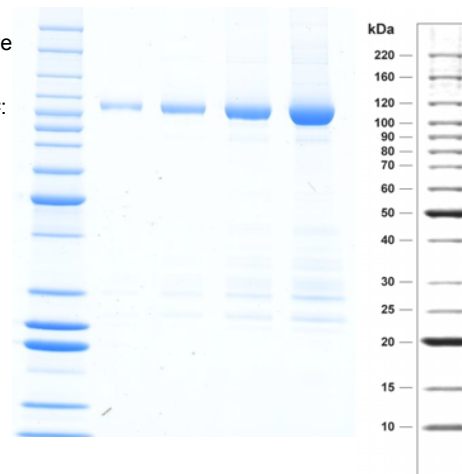
Lane 1: Invitrogen™ BenchMark™ Protein Ladder (Catalog #: 10747-012).

Lane 2: 0.4 µg DYRK3

Lane 3: 0.8 µg DYRK3

Lane 4: 2.0 µg DYRK3

Lane 5: 4.0 µg DYRK3



Purity:

75% as determined by a SDS-PAGE gel stained with SimplyBlue™ SafeStain.

Molecular Weight:

93.2 kDa. Calculated from the protein sequence(s).

Mass Spectrometry:

DYRK3 was subjected to proteolytic digest followed by mass spec analysis. The resulting MS/MS data verified DYRK3 identity by comparison against the amino acid sequence(s) of the recombinant protein.

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_003573

1	MAPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	GDVKLTQDMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	GST TAG
1	MAPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	GDVKLTQDMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	IVGN DYRK3
1											NP_003573
101	DIRYGVSRIA	YSKDFETLKV	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	KRIEAIQID	KYLKSSSKYIA	
101	DIRYGVSRIA	YSKDFETLKV	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	KRIEAIQID	KYLKSSSKYIA	
1											
201	WPLQGWQATF	GGGDHPPKSD	LVPR								
201	WPLQGWQATF	GGGDHPPKSD	LVPRHNTSL	YKKAGTMGGT	ARGPGRKDAG	PPGAGLPPQQ	RRLGDGVYDT	FMMIDETKCP	PCSNVLCNPS	EPPPPRRLNM	
1				-----MGGT	ARGPGRKDAG	PPGAGLPPQQ	RRLGDGVYDT	FMMIDETKCP	PCSNVLCNPS	EPPPPRRLNM	
224											
301	TTEQFTGDHT	QHFLDGGEMK	VEQLFQEFGN	RKSNTIQSDG	ISDSEKCSPT	VSQGSSSDCL	NTVKSNSSSK	APKVVLPTPE	QALKQYKHHL	TAYEKLKQD	
65	TTEQFTGDHT	QHFLDGGEMK	VEQLFQEFGN	RKSNTIQSDG	ISDSEKCSPT	VSQGSSSDCL	NTVKSNSSSK	APKVVLPTPE	QALKQYKHHL	TAYEKLKQD	
224											
401	YPEIYFVGN	AKKRHGVIGG	PNNGGYDDAD	GAYIHVPRDH	LAYRYEVLKI	IGKGSFGQVA	RVYDHKLQRY	VALKMRNEK	RFHRQAAEEI	RILEHLKKQD	
165	YPEIYFVGN	AKKRHGVIGG	PNNGGYDDAD	GAYIHVPRDH	LAYRYEVLKI	IGKGSFGQVA	RVYDHKLQRY	VALKMRNEK	RFHRQAAEEI	RILEHLKKQD	
224											
501	KTGSMNVIHM	LESFTFRNHV	CMAFELLSD	LYELIKKNKF	QGFVSQVLRK	FAQSILQSLD	ALHKNKIHC	DLKPENILLK	HHGRSSTKVI	DFGSSCFEYQ	
265	KTGSMNVIHM	LESFTFRNHV	CMAFELLSD	LYELIKKNKF	QGFVSQVLRK	FAQSILQSLD	ALHKNKIHC	DLKPENILLK	HHGRSSTKVI	DFGSSCFEYQ	
224											
601	KLYTYIQSRF	YRAPEIILGS	RYSTPIDIWS	FGCILAELLT	GQPLFPGEDE	GDQLACMMEL	LGMPPPKLLE	QSKRAKYFIN	SKGIPRYCSV	TTQADGRVVL	
365	KLYTYIQSRF	YRAPEIILGS	RYSTPIDIWS	FGCILAELLT	GQPLFPGEDE	GDQLACMMEL	LGMPPPKLLE	QSKRAKYFIN	SKGIPRYCSV	TTQADGRVVL	
224											
701	VGGRSRRGKK	RGPPGSKDWG	TALKGCDDYL	FIEFLKRLCH	WDPSARLTPA	QALRHPWISK	SVPRPLTTID	KVSGKRVVNP	ASAFQGLGSK	LPPVVGIANK	
465	VGGRSRRGKK	RGPPGSKDWG	TALKGCDDYL	FIEFLKRLCH	WDPSARLTPA	QALRHPWISK	SVPRPLTTID	KVSGKRVVNP	ASAFQGLGSK	LPPVVGIANK	
224											
801	LKANLMSETN	GSIPLCSVLP	KLIS								
565	LKANLMSETN	GSIPLCSVLP	KLIS								

* highlighted residues denote differences from the reference protein sequence(s).



Chevoyn Joseph, Director, Quality

Date: 14/Mar/2025

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