

Certificate of Analysis

TEK (TIE2) Y897S, 10 µg

Recombinant human TIE2 (Y897S) expressed in insect cells

ThermoFisher
SCIENTIFIC

Part Number: A30519

Lot Number: 2380536

Immediate Storage: -80°C

Shipping Conditions: dry ice

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Description:

Recombinant human TEK (TIE2) Y897S (771 - end) was expressed in insect cells using a N-terminal GST tag.

TEK (TIE2) Y897S receptor tyrosine kinase is expressed principally on vascular endothelium. Disrupting TEK Y897S function in mice results in embryonic lethality with defects in embryonic vasculature, suggests a role in blood vessel maturation and maintenance. Angiopoietin-1 is a secreted growth factor that binds to and activates the TEK receptor tyrosine kinase. SHP2 and GRB2 are recruited to the activated TEK kinase domain and are part of the cellular responses that mediate TEK function. TEK expression is upregulated in the endothelium of vascular "hot spots" in human breast cancer specimens. However, TEK is also overexpressed in areas of active angiogenesis in normal tissues.

Accession Number:

The gene accession number for TEK (TIE2) Y897S is NP_000450.2.

Specific Activity:

170 nmoles of phosphate transferred to poly [Glu, Tyr] 4:1 substrate per minute per mg of total protein for 15 min at 30°C.

Concentration:

0.1 mg/mL as determined by densitometry of the kinase gel band(s).

Calculated **1,500 nM**.

Aliases:

TIE-2, TEK, VMCM, VMCM1, CD202B

Storage and Handling:

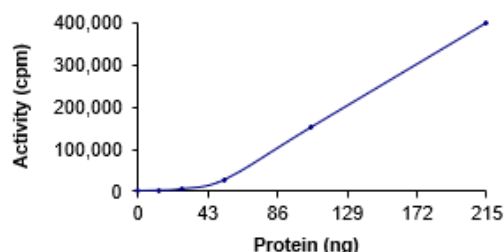
For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 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-HCl (pH 7.5), 150 mM NaCl, 10 mM Glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF and 25% Glycerol.

QUALITY ASSURANCE

TEK (TIE2) Y897S Activity Graph



Dilution Buffer:

5 mM MOPS (pH 7.2), 2.5 mM β-glycerol-phosphate, 5 mM MgCl₂, 2.5 mM MnCl₂, 0.4 mM EDTA, 50 µM DTT and 50 ng/µL BSA.

Assay Conditions:

TEK (TIE2) Y897S was pre-diluted in enzyme dilution buffer and assayed in 5 mM MOPS (pH 7.2), 2.5 mM β-glycerol-phosphate, 5 mM MgCl₂, 2.5 mM MnCl₂, 0.4 mM EGTA, 50 µM DTT with 50 µM ATP, trace [³³P]-γ-ATP and 200 µg/mL poly [Glu, Tyr] 4:1 substrate for 15 minutes at 30°C.

Gel Information for TEK (TIE2) Y897S

Page Description: Run on an SDS-PAGE gel and stained with Coomassie®.

Lane 1: Molecular Weight markers as labeled.

Lane 2: TEK (TIE2) Y897S



Purity:

> 80% as determined by a Coomassie® blue stained SDS-PAGE gel, excluding endogenous GST.

Molecular Weight:

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

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_000450.2

1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEHLVERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAISMLEGAVL GST
1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEHLVERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAISMLEGAVL Life TIE2 (Y8975)
1 ----- NP_000450.2

101 DIRYGVSRIAYSKDFETLKVDFLSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAIPIQIDKYLKSSKYIA
101 DIRYGVSRIAYSKDFETLKVDFLSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAIPIQIDKYLKSSKYIA
1 -----

201 WPLQGWQATFGGGDHPKSD
201 WPLQGWQATFGGGDHPKSDLVPRGSQLKRANVQRRMAQAFQNVREEPAVQFNSGTLALNRKVKNPDPTIYPVLDWNDIKFQDVIGEGNFGQVLKARIK
1 -----QLKRANVQRRMAQAFQNVREEPAVQFNSGTLALNRKVKNPDPTIYPVLDWNDIKFQDVIGEGNFGQVLKARIK

220
301 KDGLRMDAAIKRMKEYASKDDHRDFAGELEVLCKLGHPNIIINLLGACEHRGSLYLAIEYAPHGNLLDFLRKSRVLETDPAFAIANSTASTLSSQQLLHF
75 KDGLRMDAAIKRMKEYASKDDHRDFAGELEVLCKLGHPNIIINLLGACEHRGYLYLAIEYAPHGNLLDFLRKSRVLETDPAFAIANSTASTLSSQQLLHF

220
401 AADVARGMDYLSQKQFIHRDLAARNILVGENYVAKIADFGLSRGQEVYVKKTMGRLPVRWMAIESLNYSVYTTNSDVWSYGVLLWEIVSLGGTPYCGMTC
175 AADVARGMDYLSQKQFIHRDLAARNILVGENYVAKIADFGLSRGQEVYVKKTMGRLPVRWMAIESLNYSVYTTNSDVWSYGVLLWEIVSLGGTPYCGMTC

220
501 AELYEKLPGYRLEKPLNCDDEVYDLMRQCWREKPYERPSFAQILVSLNRMLEERKTYVNTTLYEKFTYAGIDCSAEAAA
275 AELYEKLPGYRLEKPLNCDDEVYDLMRQCWREKPYERPSFAQILVSLNRMLEERKTYVNTTLYEKFTYAGIDCSAEAAA

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



Shannon Orr, Sr. Manager, Quality

Date: 15/Jul/2021

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