



human c-Kit-N Terminal His Tag Active Enzyme

CD117, SCF Receptor, Steel Factor Receptor, Mast Cell Growth Factor

BACKGROUND

C-Kit is the receptor tyrosine kinase for stem cell factor (SCF) and is a member of the subfamily that includes PDGF, CSF-1 and FLT-3/flk-2 receptors). It plays critical controlling roles in a number of cell types such as hematopoietic stem cells, mast cells, melanocytes and germ cells. Upon binding with its ligand, c-Kit receptors are induced undergoing dimerization/ oligomerization and autophosphorylation. Activation of c-Kit results in the recruitment and tyrosine phosphorylation of downstream SH2-containing signaling components including PLCgamma, p85 subunit of PI3 kinase, SHP2 and CrkL, which links c-Kit directly to various cell signaling pathways. Molecular lesions that impair the kinase activity of c-Kit are associated with a variety of developmental disorders, while mutations that constitutively activate c-Kit can lead to pathogenesis of mastocytosis and gastrointestinal stromal tumors. Tyrosine 719 is located in the kinase insert region of the catalytic domain. c-Kit phosphorylated at Tyr719 binds to the p85 subunit of PI3 kinase in vitro and in vivo (7).

ORDERING INFORMATION

CATALOG NUMBER
X1760E

SIZE
10 µg

STORAGE CUSTOMER
Product should be stored at -70°C. Aliquot to avoid freeze/thaw cycles

STABILITY
Products are stable for one year from purchase when stored properly

SHIP CONDITIONS
Ship on dry ice, freeze upon arrival

FORMULATION
Provided in 25 mM Tris-HCl, 100 mM NaCl, pH 8.0, 0.05% Tween-20, 3 mM DTT and 50% glycerol

CONCENTRATION

SOURCE
a.a. 544-976 of human c-kit protein, tagged with 6 x his

ACTIVITY

Optimal concentration should be evaluated by serial dilutions.

PURITY

>80% by SDS-PAGE

REFERENCES

1. Yarden, Y., et al., EMBO J. 6 (11), 3341-3351 (1987)

For research use only. Not for use in human diagnostics or therapeutics.

ASSAY METHODS

MATERIALS

Assay buffer: 50 mM HEPES, pH 7.4, 3 mM MgCl₂, 3 mM MnCl₂, 1 mM DTT, 3 μM Na-orthovanadate, 0.1 mM ATP, 30 μg/ml Poly (Glu:Tyr)4:1 substrate, and 4 μg /ml recombinant cKit.

PROCEDURE

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