EGF Receptor Substrate 2 (Phospho-Tyr5)

Cat. No.: HY-P0320

CAS No.: 149261-42-7

Molecular Formula: $C_{54}H_{82}N_{13}O_{24}P$

Molecular Weight: 1328.28

Sequence: H-Asp-Ala-Asp-Glu-{pTyr}-Leu-Ile-Pro-Gln-Gln-Gly

Sequence Shortening: DADE-{pTyr}-LIPQQG

Target: EGFR

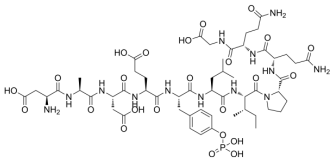
Pathway: JAK/STAT Signaling; Protein Tyrosine Kinase/RTK

Storage: Sealed storage, away from moisture

Powder -80°C 2 years

-20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 50 mg/mL (37.64 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	0.7529 mL	3.7643 mL	7.5285 mL
	5 mM	0.1506 mL	0.7529 mL	1.5057 mL
	10 mM	0.0753 mL	0.3764 mL	0.7529 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

EGF Receptor Substrate 2 (Phospho-Tyr5) is a biologically active peptide derived from an autophosphorylation site (Tyr^{992}) of epidermal growth factor receptor (EGFR).

In Vitro

DADEpYLIPQQG is a generalized PTPase substrate. Both CAV GST-VP2 and TLMV GST-ORF2 are shown to have PTPase activity using both ENDpYINASL and DADEpYLIPQQG. Steady state activities for the reaction of 5 μg of CAV GST-VP2 with ENDpYINASL and DADEpYLIPQQG are 100 and 208%, respectively, of those seen for 2 units of TC-PTP[1]. In the context of DADEpYLIPQQG, the minimal sizes recognized by PTPα are either ADEpYLI or DADEpY-NH2. The k_{cat}/K_m value for the parent peptide DADEpYLIPQQG ($EGFR^{988-998}$) is 1090-fold higher than Tyr(P)[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]	Briefly, the assays are performed in 50 µL volumes in a microtiter plate using the generalized PTPase substrates ENDpYINASL and DADEpYLIPQQG (where pY represents phosphotyrosine) and assay buffer containing 25 mM Tris-HCl (pH 7.4), 50 mM NaCl, 2 mM EDTA, 5 mM dithiothreitol, 0.01% Brij 35, and 1 mg of bovine serum albumin/mL. The reactions are started by the addition of 5 µg of either CAV GST-VP2, GST, CAV GST-VP2 containing the C95S mutation, or TLMV GST-ORF2 or 2 units of the positive control T cell protein-tyrosine phosphatase (TC-PTP) in assay buffer. Control reactions are assayed with either ENDpYINASL substrate alone, DADEpYLIPQQG substrate alone, CAV GST-VP2 without substrate, CAV GST-VP2 containing the C95S mutation without substrate, TLMV GST-ORF2 without substrate, TC-PTP without substrate, or assay buffer with neither enzyme nor substrate. A phosphate standard curve is derived using a supplied phosphate standard. The reactions are terminated by the addition of the malachite green detection reagent. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Peters MA, et al. Chicken anemia virus VP2 is a novel dual specificity protein phosphatase. J Biol Chem. 2002 Oct 18;277(42):39566-73. Epub 2002 Jul 31.

[2]. Wu L, et al. Comparative kinetic analysis and substrate specificity of the tandem catalytic domains of the receptor-like protein-tyrosine phosphatase alpha. J Biol Chem. 1997 Mar 14;272(11):6994-7002.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA