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ProductInformation

Poly(L-glutamic acid-L-tyrosine) sodium salt

Product Number **P 0275**
Storage Temperature –20 °C

Synonyms: Poly(Glu-Tyr), E4-Y1
CAS Number: 97105-00-5

Product Description

Molecular weight range: 20,000-50,000 Da

Poly(L-glutamic acid-L-tyrosine), sodium salt, has a random amino acid distribution. The molar ratio of glutamic acid:tyrosine is approximately 4:1. The molecular weight range is determined by viscosity. It is a sodium salt polymer. The polymer contains approximately 1 mole of sodium per mole of glutamic acid, though the amount of sodium present may vary slightly from lot to lot.

This product has been used as a substrate for protein tyrosine kinase (PTK) in an enzyme-linked immunosorbent assay.[1] It is bound to the wells of a multiwell plate, where it is phosphorylated in the presence of adenosine 5′-triphosphate (ATP) and PTK. The phosphorylated tyrosine residues are detected by means of an ELISA using monoclonal anti-phosphotyrosine (Product No. P 3300), that in turn is recognized by a peroxidase-labeled goat anti-mouse IgG. Alternatively peroxidase-labeled monoclonal anti-phosphotyrosine (Product No. A 5964) may be used. Color development results upon the addition of hydrogen peroxide and o-phenylenediamine or other suitable dye and is proportional to the amount of phosphotyrosine present on the surface of the well.

The assay is rapid, inexpensive, highly sensitive, reproducible, and avoids use of radioactive ATP. However, it is not quantitative for the amount of phosphate incorporated into the substrate. This can be achieved in a similar assay system by using ^{32}P-ATP as the substrate and detecting tyrosine-bound ^{32}P by scintillation spectroscopy. A ^{32}P standard curve is used to quantitate bound ^{32}P.

Poly(L-glutamic acid-L-tyrosine) has been reported to inhibit some tyrosine-specific protein kinases.[2]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

Poly(L-glutamic acid-L-tyrosine), sodium salt, is soluble in water (50 mg/ml).

References

1. Lazaro, I., et al., Description of an enzyme-linked immunosorbent assay for the detection of protein tyrosine kinase. Anal. Biochem., **192**, 257-261 (1991).
2. Hayashi, H., et al., Involvement of tyrosine protein kinase in the initiation of flagellar movement in rainbow trout spermatozoa. J. Biol. Chem., **262**, 16692-16698 (1987).

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