https://badrilla.com

PP-1 activator peptide; PDP3 Peptide, cell permeable

Quality Control Certificate of Analysis
Catalogue No.: P010-610
Unit Size: 1 mg
Lot no.: 642206

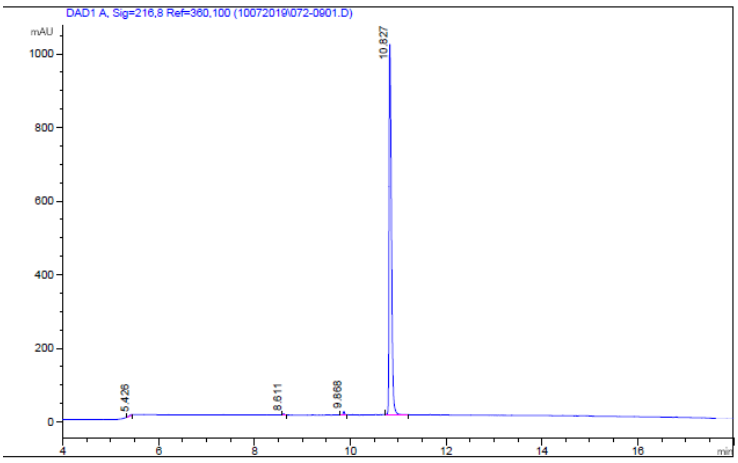
Description	PDP3 peptide is an activator of protein phosphatase-1 enzyme. It is fused to a polybasic peptide which renders the peptide cell permeable. The peptide interferes with the binding of regulatory (inhibitory) proteins to PP-1 and liberates a PDP3-PP1 catalytically active enzyme (EC50 176 nM; 1). This reduces protein phosphorylation within cells and affects numerous cellular processes including Ca2+-signaling via IP3R (1). It provokes Ca2+-oscillations in HeLa cells (1). It does not affect PP-2A or PP-2B. PDP3 is long lived inside cells. It contains the unnatural amino acid Bpa (L-4-Benzoylphenylalanine) located C-terminally to the RVTF-type docking motif, which makes it exceptionally stable inside cells. It induces long-lasting activation of PP-1 which extends beyond the washout of the peptide from a cell perfusion experiment (1). PDP3 in this current form is cell permeable.
Quantity supplied	1 mg solid
Peptide name	PDP3 Peptide
Peptide sequence	`Ac-RRKRPKRKRKNARVTF-Bpa-EAAEII-NH2`
N-terminus	Acetyl-
C-terminus	Amide
Counter ions	Trifluroacetate (TFA)
Molecular weight	`3016.573`
Purity	>98% (by HPLC)
HPLC analysis	

Image: HPLC analysis of PDP3 Peptide. Analysis carried out at 60°C using 100Å 4.6 x 150mm XB-C18 reverse phase column, gradient from 0%-80% acetonitrile, in 15 minutes. Dissolved in DMSO. Purity determined as 98.8%.

Badrilla Ltd. 15 Queen Square, Leeds LS2 8AJ, UK. Tel: +44 (0)7801 730618. Email: info@badrilla.com

MS analysis

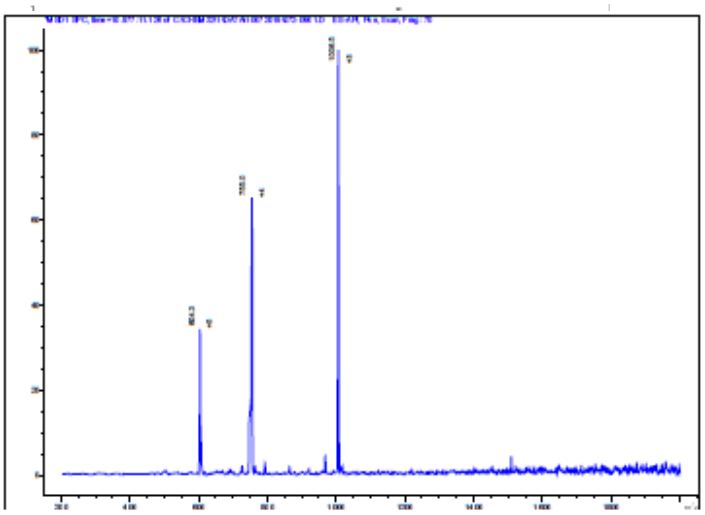


Image: **MS Analysis of PDP3 peptide**. Molecular ion predicted: 3016.57 observed: 3016.5 ([M+3H]). The range of molecular ions observed is due to the various multiply charged forms of the peptide ([M+3H], [M+4H], [M+5H]).

Appearance

Lyophilised off-white solid. Solid barely visible at 1mg quantities.

Solubilisation

Dissolve in a minimum volume (suggest 50 µL) dimethyl sulfoxide (DMSO), vortex thoroughly to dissolve peptide. Then add water to desired volume. The addition of 614.5 µL water will create a stock solution of 500 µM peptide (containing 7.5% DMSO).

Storage

Store desiccated at -20°C for up to 1 year in solid form. Dissolve in DMSO immediately before use in experiments. Stability in solution not known. Storage of solution likely best at -20◦C.

Notes

The product was purified in acetonitrile and water containing 0.1% trifluoroacetic acid (TFA) prior to lyophilisation. The product will therefore be present as its trifluoroacetic acid salt.

* Whilst the purity of the material has been shown to be >95%, the net peptide content (NPC) is lower due to counterions and residual water molecules present in the material after purification.

1: Reither, G., Chatterjee, J., Beullens, M., Bollen, M., Schultz, C & Kohn, M (2013) Chemical activators of protein phosphatase-1 induce calcium release inside intact cells. Chemistry & Biology 20, 1179-86