

## Recombinant Enzyme Product Specification Sheet

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|----------------------------------|--|
| <b>Cat. No.:</b>                 | PRO-E0079  |
| <b>LOT:</b>                      | 2008-0079  |
| <b>Activity:</b>                 | Phosphoserine phosphatase  |
| <b>Synonyms:</b>                 | O-Phosphoserine phosphohydrolase, PSP, PSPase  |
| <b>Nomenclature:</b>             | HAD9, SerB, ECK4380, b4388, JW4351, EG10945  |
| <b>Source organism:</b>          | <i>Escherichia coli K-12 (MG1655)</i>  |
| <b>Enzyme Commission No.:</b>    | 3.1.3.3  |
| <b>Activity:</b>                 | <div> <p><b>NOTE:</b> this product is currently under development. If you wish to prioritise the production of this enzyme, please follow <a href="#">this link</a></p> </div>   |
| <b>Specific activity:</b>        |  |
| <b>Purity:</b>                   |  |
| <b>Form and storage:</b>         |  |
| <b>pH optimum:</b>               |  |
| <b>Temperature optimum:</b>      |  |
| <b>[Protein]:</b>                | -  |
| <b>Sequence length:</b>          | 322 amino acids ( <a href="#">view sequence</a> )  |
| <b>Accession No.:</b>            | P0AGB0   |
| <b>Molecular weight:</b>         | 37206.0 Da (theoretical)<br>- (observed by SDS-PAGE)<br>- (observed by mass spectrometry)  |
| <b>Biological function:</b>      | Catalyses the dephosphorylation of pNP-phosphate, acetyl-phosphate, carbamoyl-phosphate, imido-diphosphate and various natural nucleotide phosphates and phosphorylated amino acids, most notably phosphoserine, but also (in order of increasing specific activity): CMP, AMP, GMP, IMP, TMP, dUMP, UMP, XMP and phosphothreonine |
| <b>Potential application(s):</b> | Biocatalysis, Biochemistry   |
| <b>Comments:</b>                 | Belongs to the <a href="#">HAD-like hydrolase superfamily</a>  |
| <b>Usage:</b>                    | -  |
| <b>Assay:</b>                    | -  |

**Primary sequence:**

MPNITWCDLPEDVSLWPGLPLSLSGDEVMPLDYHAGRSGWLLYGRGLDKQRLTQYQSKLG  
AAMVIVAAWCVEDYQVIRLAGSLTARATRLAHEAQLDVAPLGKIPHLRTPGLLVMDMDST  
AIQIECIDEIAKLAGTGEMVAEVTERRAMRGELDFASLRSRVATLKGADANILQQVRENL  
PLMPGLTQLVLKLETLGWKVAIASGGFTFFAEYLRDKLRLTAVVANELEIMDGKFTGNVI  
GDIVDAQYKAKTLTRLAQEYEIPLAQTVAGDGLDPMIKAAGLGIAYHAKPKVNEKAE  
VTIRHADLMGVFCILSGSLNQK

**Literature:**

1. [Kuznetsova et al. \(2006\) J. Biol. Chem. 281, 36149-36161](#)