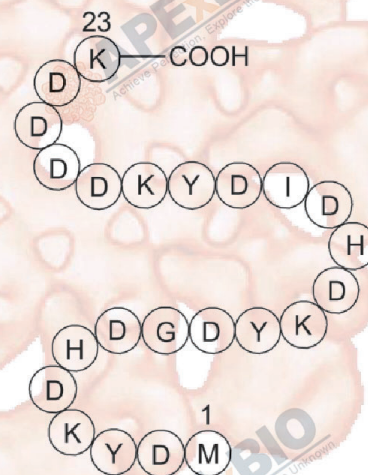


Product Data Sheet

3X (DYKDDDDK) Peptide

Cat. No.:	A6001
CAS No.:	402750-12-3
Formula:	C ₁₂₀ H ₁₆₉ N ₃₁ O ₄₉ S
M.Wt:	2861.87
Synonyms:	H-Met-Asp-Tyr-Lys-Asp-His-Asp-Gly-Asp-Tyr- Lys-Asp-His-Asp-Ile-Asp-Tyr-Lys-Asp-Asp-As p-Asp-Lys-OH
Target:	Tag Peptides
Pathway:	
Storage:	Desiccate at -20°C



Solvent & Solubility

≥25mg/ml in TBS (0.5M Tris-HCl, pH 7.4, with 1M NaCl), 1X TBS as recommended buffer.

In Vitro

	Solvent Concentration	Mass		
		1mg	5mg	10mg
Preparing				
Stock Solutions	1 mM	0.3494 mL	1.7471 mL	3.4942 mL
	5 mM	0.0699 mL	0.3494 mL	0.6988 mL
	10 mM	0.0349 mL	0.1747 mL	0.3494 mL

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

Biological Activity

Shortsummary

Synthetic peptide tag

IC₅₀ & Target

Cell Viability Assay

In Vitro

Preparation method:

3-DYKDDDDK peptide has found widespread use as a mild purification reagent for DYKDDDDK-epitope tagged recombinant proteins. Although its affinity columns release monovalent flagged proteins in the absence of calcium, the antibody retains substantial affinity for the DYKDDDDK sequence even in metal-free conditions, so that it has been impossible to use it to develop a metal-sensitive ELISA assay. This is

due to the ability of the antibody to remain bound to polyvalent surface-coated antigen, for instance, when Flagged proteins are bound to ELISA plates or blotting filters. The resultant antigen polyvalence raises the avidity of the DYKDDDDK antibody to a point where the reaction is essentially calcium-independent. However, when the antibody itself was made monovalent, by proteolytic cleavage to the Fab, this situation was reversed and the ELISA reaction became calcium-dependent. This new metal-dependent ELISA assay was used to explore the metal requirements of the antibody in detail. Among divalent metals, binding tapered off with increasing radius above that of calcium, or with decreasing radius below that of calcium. Several smaller metals, such as nickel, acted as inhibitors of the binding reaction. Substantial binding was demonstrated for heavy metals such as cadmium, lanthanum and samarium. Because it is of interest to use this antibody for the co-crystallization of recombinant DYKDDDDK-fusion proteins, the ability to bind heavy metals was a significant finding.

Applications:

The solubility of this peptide in sterile water is >10 mM. Stock solution should be split and stored at -80°C for several months.

Animal experiment

Applications:

In Vivo

Product Citations

1. Miller CJ, Lou HJ, et al. "Comprehensive profiling of the STE20 kinase family defines features essential for selective substrate targeting and signaling output." PLoS Biol. 2019 Mar 21;17(3):e2006540.PMID:30897078
2. Zhang M, Ergin V, et al. "Axonogenesis Is Coordinated by Neuron-Specific Alternative Splicing Programming and Splicing Regulator PTBP2." Neuron. 2019 Feb 20;101(4):690-706.e10.PMID:30733148
3. Charles A Berdan, Raymond Ho, et al. "Parthenolide Covalently Targets and Inhibits Focal Adhesion Kinase in Breast Cancer Cells." bioRxiv. 2019 February 14.
4. Gomes ID, Pflum MKH. "Optimal substrate trapping mutants to discover substrates of HDAC1." Chembiochem. 2019 Jan 30.PMID:30701667
5. Liang Z, Liang F, et al. "Binding of FANCI-FANCD2 Complex to RNA and R-Loops Stimulates Robust FANCD2 Monoubiquitination." Cell Rep. 2019 Jan 15;26(3):564-572.e5.PMID:30650351

See more customer validations on www.apexbt.com.

References

1. Hopp TP1, Gallis B, Prickett KS. Metal-binding properties of a calcium-dependent monoclonal antibody. Mol Immunol. 1996 May-Jun;33(7-8):601-8.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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