

BPHL Protein, Human (His)

Cat. No.:	HY-P76177
Synonyms:	Biphenyl hydrolase like; Bph-rp; VACVase; Valacyclovirase; MCNAA
Species:	Human
Source:	E. coli
Accession:	Q86WA6-1 (S38-Q291)
Gene ID:	670
Molecular Weight:	Approximately 30 kDa.

PROPERTIES

AA Sequence	SVTSAKVAVN GVQLHYQQTG EGDHAVLLLP GMLGSGETDF GPQLKNLNKK LFTVVAWDPR GYGHSRPPDR DFPADFFERD AKDAVDLMKA LKFKKVSLLG WSDGGITALI AAAKYPSYIH KMWIWGANAY VTDEDSMIYE GIRDVSKWSE RTRKPLEALY GYDYFARTCE KWVDGIRQFK HLPDGNICRH LLPRVQCPAL IVHGEKDPLV PRFHADFIHK HVKGSRLHLM PEGKHNLHLR FADEFNKLAE DFLQ
Biological Activity	Defined as the amount of valacyclovir that 1µg of BPHL can hydrolysis at 37°C for 1 minute. The specific activity is 25.264 pmol/min/µg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	BPHL protein, a serine hydrolase, serves as a catalyst for the hydrolytic activation of amino acid ester prodrugs, exemplified by nucleoside analogs like valacyclovir and valganciclovir. Notably, it facilitates the conversion of valacyclovir to acyclovir through hydrolysis. Beyond its role in drug activation, BPHL is implicated in potential detoxification processes. As a specific
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alpha-amino acid ester hydrolase, it displays a preference for small, hydrophobic, and aromatic side chains, without imposing strict requirements on the leaving group, except for a preference toward a primary alcohol. Existing as a monomer, BPHL may also engage in the formation of homodimers.

Caution: Product has not been fully validated for medical applications. For research use only.

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