

HORSERADISH PEROXIDASE (HRP)

EC Number	1.11.1.7
Alternative Names	Donor:hydrogen-peroxide oxidoreductase
Assay Principle	$\text{H}_2\text{O}_2 + \text{pyrogallol} \xrightarrow{\text{Peroxidase}} \text{Purpurogallin} + 2\text{H}_2\text{O}$
Unit Definition	That amount of enzyme that will catalyse the production of 1mg of purpurogallin from pyrogallol in 20 seconds at 20°C and pH 6.0.

How can Horseradish Peroxidase be used?

Horseradish Peroxidase (HRP) is used in a wide range of liquid clinical chemistry reagents, dry powder reagents and test strips. It is also commonly used as a label in immunoassays such as ELISA, and in blotting and histochemistry. Once conjugated to antibodies, antigens, or streptavidin, its rapid turnover rate gives high sensitivity over short incubation times. Peroxidase conjugates may give higher backgrounds than other enzyme conjugates, hence extra blocking steps, e.g. the introduction of APO Peroxidase, may be necessary. It can be used with a variety of substrates producing precipitated or soluble chromogens, or with chemiluminescent and fluorogenic substrates for enhanced sensitivity.



Why choose BBI for your supply?

BBI Solutions (BBI) is the world's leading producer of HRP and has supplied the diagnostics industry with this key enzyme for over 40 years. Our facilities process over 2 tonnes of horseradish root per day which gives you the flexibility to order in volumes from grams to kilograms.

Our many commercial partners have come to rely on BBI for consistent production of high quality products for clinical chemistry and immunoassay applications, using our optimised purification procedures.

Key Benefits

+ CONTROLLED AND CONSISTENT SUPPLY

We have developed close relationships with horseradish growers to ensure year round supply of specially selected and cultivated horseradish roots

+ HIGH ISOZYME C CONTENT

>90% isozyme C provides exceptional purity so that you can be confident in your results

+ HIGH ACTIVITY LEVELS

~280 U/mg, for some batches we achieve >300 U/mg providing consistent and reliable performance

+ HIGHLY AVAILABLE AMINO GROUPS

For clean conjugation

+ BULK EXTRACTION & PURIFICATION CAPABILITY

Our optimised large scale manufacturing processes produce high volumes of clinical chemistry and immunoassay grades enabling us to fulfil your orders efficiently

Order your evaluation sample today

Product	Code	Activity	Rz	Isozyme	Applications
Peroxidase	161451BBI	>250 U/mg	>3		Immunoassay/Bulk
	161453BBI	>100 U/mg Pyrogallol	>1		Clinical Chemistry/Bulk
	161455BBI	>60 U/mg Pyrogallol	>0.6		Clinical Chemistry/Bulk
	161457BBI	>200 U/mg	2-4		Clinical Chemistry/Bulk
	APO/HRP4C		>0.05		Blocking Interference
	HRP3C	>150 U/mg	>2		Clinical Chemistry
	HRP4	>250 U/mg	>3		Immunoassay
	HRP4B	>250 U/mg	>3	>90%	Immunoassay
	HRP4C	>250 U/mg	>3		Clinical Chemistry/Urine Test Strips
	HRP5	>75 U/mg	~3.5		Blocking Interference

FAQ's

HOW IS HRP PRODUCED?

The enzyme is extracted from horseradish roots then purified using multiple precipitation, fractionation, chromatography and filtration steps.

ARE CUSTOMISED PRODUCT SPECIFICATIONS AVAILABLE?

We will profile your requirements against our process capability to meet a specification suitable to your needs.

HOW SHOULD THE MATERIAL BE STORED?

Store desiccated at -15°C or below.

HOW IS IT SUPPLIED?

Our final products are lyophilised powders.

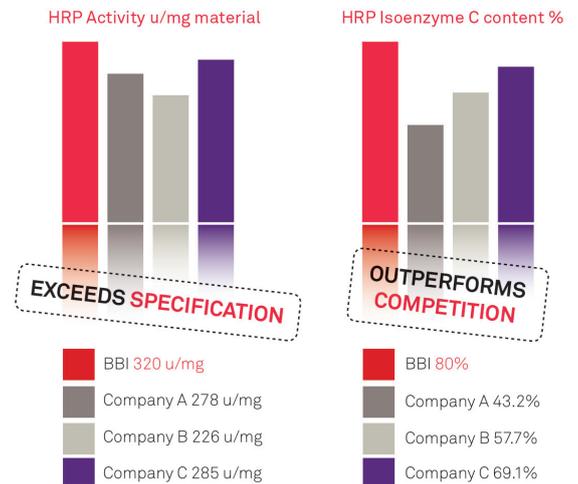
Stability

Codes Starting HRP – Stable for 5 years when stored in accordance with storage conditions.

Codes Starting 161 – Stable for 3 years when stored in accordance with storage conditions.

Product Analysis

AN EXAMPLE OF TYPICAL HRP4 BATCH DATA



Related Products

Application Area	Product Name	Code	Activity
Immunoassays	Alkaline Phosphatase	ALPI12G	> 2000 Glycine U/mg protein
Urine Test Strips	Glucose Oxidase	G02BS	> 180 U/mg material
Biosensors	Glucose Oxidase	G03A	~ 360 U/mg protein
Biosensors	Glucose Oxidase	G03B2	~ 360 U/mg protein
Biosensors	Cholesterol Esterase	CE2	> 35 U/mg material
Biosensors	Cholesterol Oxidase	C05F	> 12 U/mg material
Biosensors	Creatinase	CR1F	> 9 U/mg material
Biosensors	Creatininase	CNN1	> 500 U/mg material
Biosensors	Sarcosine Oxidase	S02F	> 20 U/mg material
Biosensors	Uricase	U5	> 4 U/mg material

Order a sample today sales@bbisolutions.com

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