

BIOTEM  
885, rue Alphonse Gourju  
38140 Apprieu  
FRANCE

Tel: +33 (0)4 76 65 10 91

Fax: +33 (0)4 76 67 48 86

[info@biotem.fr](mailto:info@biotem.fr)

[www.biotem-antibody.com](http://www.biotem-antibody.com)

TECHNICAL DATASHEET

## Monoclonal Anti-Phenylalanine (unconjugated)

Ref # BIO.021.9

### Product description

Description	Monoclonal antibody to phenylalanine - <b>14H10</b>
Host species	Mouse
Epitope	Free L-phenylalanine Phenylalanine in peptides or proteins at C terminal position
Tested applications	ELISA, LFIA
Specificity	Antibody specificity was performed with an ELISA test by competition experiments:

Concentration	Inhibition (%)		
	20 µg/ml	10 µg/ml	5 µg/ml
L-Phenylalanine	100%	50%	20%
L-Tyrosine	10%	0%	0%
L-Tryptophane	10%	0%	0%

### Target exploration

#### Overview:

Phenylalanine is the most commonly found aromatic, essential amino acid. In a normal individual it is converted to tyrosine, which in turn is used to synthesise dopamine and norepinephrine (neurotransmitters). Phenylalanine takes three different forms; L-, D- and DL-. The L- form is the most common and the type in which it is incorporated into the body's proteins. The D- form acts as a painkiller and the DL- a combination of the two.

Blood phenylalanine level is the primary measurement used by physicians, to monitor PKU patient. Maintaining blood phenylalanine levels within a specified range is essential to cognitive development for patient with PKU.

Sustained, and even sporadic, high levels of phenylalanine can cause severe neurological complications.

The risks of intellectual disability are minimized by strict dietary control of blood phenylalanine throughout life with correct amino acid supplementation.

## Properties

Form	Purify
Storage instructions	Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles
Storage buffer	Phosphate Buffered Saline 10 mM – NaCl 0.15 M– pH 7.4 – Thimerosal 0,01% may be used as preservative
Purity	IgG fraction
Clonality	Monoclonal
Isotype	IgG2a
Restrictions	For research use only

## Applications

ELISA	Recommended dilutions: 20 at 100ng/ml but use at an assay dependent concentration
LFIA	Use at an assay dependent concentration

**Optimal dilutions/concentrations should be determined by the end user**