

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Chlorotyrosine, pAb		
Catalog number	HP5002-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	Concentration	100 µg/ml
Host species	Rabbit	Conjugate	None
Endotoxin	N.A.	Purification	Affinity
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #								
Yes	•	•				•		
No								•
N.D.			•	•	•		•	

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

General Information

Description The polyclonal antibody recognizes 3-chlorotyrosine specific protein adducts that are formed by hypochlorous acid. Polymorphonuclear leukocytes or neutrophils are one of the primary defense mechanisms against invading microorganisms and also involved in the removal of necrotic cells. However, in certain conditions, recruitment of neutrophils may aggravate existing injury. For example, neutrophils are involved in the pathophysiology of hepatic ischemia-reperfusion injury, endotoxin- and sepsis-induced liver failure, alcoholic hepatitis, and certain drug toxicities. The fact that neutrophils accumulate in the liver does not necessarily mean that they cause injury. ICAM-1 and CD18 integrins are involved in the adherence of neutrophils to target cells, e.g., hepatocytes. This results in a long-lasting adherence-dependent oxidant stress, which is a major factor in neutrophil-mediated liver cell killing. Stimulated neutrophils release oxidants, proteases, and other potentially injurious constituents. They generate superoxide radicals and hydrogen peroxide and release MPO, which catalyzes oxidation of chloride by hydrogen peroxide to give hypochlorous acid. This hypochlorous acid can react with proteins to form 3-chlorotyrosine protein adducts. A limitation for investigating the pathophysiological role of neutrophils in vivo is the lack of a reliable biomarker for neutrophil cytotoxicity. Immunohistochemical staining of liver samples with anti 3-chlorotyrosine antibody correlates well with neutrophil-induced liver injury. The polyclonal antibody can be used to assess chlorotyrosine protein adduct formation and is a useful marker of neutrophil-induced liver cell injury in vivo.

- References**
- Gujral, J et al; Chlorotyrosine protein adducts are reliable biomarkers of neutrophil-induced cytotoxicity in vivo. *Comparative Hepatology* 2004, 3: S48
 - Gujral, J et al; Functional importance of ICAM-1 in the mechanism of neutrophil-induced liver injury in bile duct-ligated mice. *Am J Physiol Gastrointest Liver Physiol* 2004, 286: G499
 - Gujral, J et al; NADPH oxidase-derived oxidant stress is critical for neutrophil cytotoxicity during endotoxemia. *Am J Physiol Gastrointest Liver Physiol* 2004, 287: G243

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions

For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC
Brenda Teunissen

Date
13/01/2021

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.