

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Pentraxin 3, Mouse, clone 2C3		
Catalog number	HM1130-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	Concentration	100 µg/ml
Host Species	Mouse IgG1	Conjugate	None
Endotoxin	<24 EU/mg	Purification	Protein G
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.

- W: A non-reduced sample treatment and SDS-Page was used. The band size is 400 kDa.
- FC: Antibody 2C3 stains the intra and extracellular domain of Pentraxin 3. For intracellular staining cells were permeabilized with buffer containing triton. As positive control transfected cells were used.
- Positive control: transfected cells.

General Information

Description Monoclonal antibody 2C3 recognizes mouse pentraxin 3 (PTX3). The first line of defense against pathogens is represented by the innate immune system. An important part of this system is the recognition of pathogen associated molecular patterns (PAMPs) by pattern recognition molecules (PRMs). Pentraxins (PTXs) are a family of soluble cyclic pentameric PRMs. Based on primary structure, they can be divided in two groups, short and long PTXs. C-reactive protein (CRP) and serum amyloid P component (SAP) are prototypic short PTXs. Others have been classified as long PTXs. PTXs have a conserved ca 200 amino acid long c-terminal domain containing the PTX signature (HxCxS/TWxS, where x is any amino acid). Human PTX3 encodes a 381 amino acid, 45 kDa secretory glycoprotein with a 162 amino acid N-terminal extension and a 202 amino acid C-terminal pentraxin domain. There is also a high degree of conservation between from mouse to man. PTX3 is the prototypic long PTX and was originally identified in endothelial cells and fibroblasts. Orthologs of PTX3 have been found in a variety of species. The PTX3 gene consists of three exons and two introns. The first two exons code for the leader peptide and the N-terminal domain of the protein, respectively, and the third exon encodes the pentraxin domain. PTX3 expression can among others be induced by proinflammatory cytokines like TNF α , IL1 β and TLR agonists. Whereas short PTXs are produced in the liver, the main source of PTX3 expression are myeloid dendritic cells but expression is also seen in monocytes, macrophages, endothelial cells (constitutively expressed), fibroblasts, smooth muscle cells, kidney epithelial cells, synovial cells, chondrocytes, adipocytes, alveolar epithelial cells, granulosa cells and glial cells. PTX3 expression can be affected by several pathways. PTX3 is also linked to the complement system. It binds to C1q, complement factor H and ficolin-2 and is therefore involved in the classical, alternative as well as the lectin pathway of complement. PTX3 seems to have an important regulating role of complement mediated immune responses. PTX3 acts as an acute phase protein and is a potential marker for infectious, inflammatory and cardiovascular pathologies. PTX3 may play a role in vascular pathology, including atherosclerosis and restenosis, and has been considered as a marker of vascular damage. In humans, PTXs levels are correlated with the risk of developing of vascular events. It is expected that PTX3 have a cardiovascular protective effect. Furthermore, PTX3 upregulation is observed in the endothelium from patients affected by systemic sclerosis, a disease characterized by insufficient angiogenesis. The latter seems to be mediated via fibroblast growth factor 2 (FGF2). The anti-angiogenic effect of PTX3, via FGF2, has also potential to interfere with tumor progression. Like CRP and SAP, PTX3 binds apoptotic cells and debris, and has been associated with the response to tissue damage. This recognition of apoptotic cells is shared by other components of innate immunity (e.g. collectins).

Immunogen Recombinant mouse PTX3

References

1. Salio M. et al. Cardioprotective function of the long pentraxin PTX3 in acute myocardial infarction. Circulation; 2008 Feb 26; 117:1055-64
2. Doni A. et al. Cell-specific regulation of PTX3 by glucocorticoid hormones in hematopoietic and nonhematopoietic cells. The journal of biological chemistry; 2008 Oct 31; 283:29983-92

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
13/11/2020

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