

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	CpG-DNA, Mouse	Expiry date	-
Catalog number	HC4033		
Lot number	-	Activity	N.A.
Volume	Reconstitute with distilled/de ionized water	Amount	200 nmol (1260 µg)
Formulation	Lyophilized purified 20-mer CpG ODN	Concentration	N.A.
Host Species	20-mer CpG ODN	Purification	N.A.
Endotoxin	<24 EU/mg	Purity	>95%
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #					1-4			
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

- FS: CpG-DNA can be used in biological assays in vitro to activate murine cells. For stimulation in vitro 0.01 to 10 µM can be used. It is recommended that users test the reagent and determine their own optimal concentrations.

General Information

Description Bacterial DNA is known to induce acute inflammatory responses. Bacterial DNA acts as a pathogen-associated molecular pattern by virtue of a 20-fold greater frequency of unmethylated CG dinucleotides found in microbial DNA versus vertebrate DNA. Cellular activation by deoxy-cytidylate-phosphate-deoxy-guanylate (CpG)-DNA occurs via the Toll/IL-1R signal pathway. TLR9 appears to be a major component of the CpG-DNA receptor, acting by direct binding to CpG-DNA. The synthetic oligodeoxynucleotides (ODN) contain the proper CpG-DNA motif mimicking the immunostimulatory effects of bacterial DNA. The human optimal CpG motif GTCGTT differs from the optimal mouse CpG motif GACGTT. Non CpG-DNA has been shown to compete with CpG-DNA in in vitro stimulation experiments. This mouse CpG is a 20-mer ODN has the following sequence: 5'-tccatgacgttcctgatgct-3'. Regular letters represent phosphorothiorate linkage.

- References**
- Kawabata, T et al; Functional Alterations of Liver Innate Immunity of Mice with Aging in Response to CpG-Oligodeoxynucleotide. Hepatology 2008, 48:1586
 - Nakashima, H et al; Activation of CD11b+ Kupffer Cells/Macrophages as a Common Cause for Exacerbation of TNF/Fas-Ligand-Dependent Hepatitis in Hypercholesterolemic Mice. PLoSOne 2012, 8:e49339
 - Hou, X et al; CD205-TLR9-IL-12 axis contributes to CpG-induced oversensitive liver injury in HBsAg transgenic mice by promotin the interaction of NKT cells with Kupffer cells. Cell Mol Immunol 2016, 13: 1
 - Yong, L et al; Identification of pro-inflammatory CD205+ macrophages in livers of hepatitis B virus transgenic mice and patients with chronic hepatitis B. nature Scien Rep 2017

Storage&stability Caution: vial is under vacuum. Lyophilized product should be stored at 4°C. Store stock solution in aliquots at -70°C. Repeated freeze and thaw cycles will cause loss of activity. Under recommended storage conditions, product is stable for 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
Robbert Zwinkels

Date
29/03/2018

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