

Summary of Studies Supporting USDA Product Licensure

Establishment Name	Elanco US Inc.
USDA Vet Biologics Establishment Number	196
Product Code	13D1.29
True Name	Canine Distemper-Adenovirus Type 2-Parainfluenza- Parvovirus Vaccine, Modified Live Virus
Tradename(s) / Distributor or Subsidiary (if different from manufacturer)	Duramune Max 5 - Elanco US Inc.
Date of Compilation Summary	December 20, 2019

Disclaimer: Do not use the following studies to compare one product to another. Slight differences in study design and execution can render the comparisons meaningless.

Study Type	Efficacy												
Pertaining to	Infectious Canir	ne Hepatitis Vir	us										
Study Purpose	To demonstrate	effectiveness ag	gainst Infectious C	anine Hepatitis									
	(ICH)			_									
Product Administration	Two doses were	administered s	ubcutaneously (SC	C) 21 days apart									
Study Animals			pies, seronegative										
	randomly sorted	l into one group	of 11 SC vaccinat	es and one									
	group of 6 contr	ols.											
Challenge Description	21 days after see	cond vaccination	n all dogs were cha	allenged with									
	Infectious Canir												
Interval observed after	Puppies were ob	oserved for 21 d	ays after challenge	e for clinical									
challenge	signs.												
Results	The study was s	atisfactory per t	the criteria in 9 CF	R 113.305									
	(1)(ii)(A)(B)												
	_												
	Mortality Clinical Signs of												
		wortanty	CDV Infection										
	SC Vaccinates	0/11 (0%)	0/11 (0%)										
	Controls	6/6 (100%)	6/6 (100%)										
USDA Approval Date	March 31, 1998												

				Car	nine Infe	ectious He	patitis Clinical Sigr	ns Obs	serve	d Pos	t Cha	lleng	е					
Dog	Treatment	0DPC	1DPC	2DPC	3DPC	4DPC	5DPC	6DPC	7DPC	8DPC	9DPC	10DP0	11DPC	12DPC	13DPC	14DPC	15DPC	16DP0
1	Control					22	N/A											-
2	Control					1,4,7,20	1,3,5,6,15,17,20,22***											
3	Control				3,13,23**	1,3,23,22***	N/A						NA					
4	Control				23**	1,3,7	1,3,6,7,17,20,22***											
5	Control			23*	3	22	N/A											
6	Control			7	7	22	N/A											
19	SC Vac																	
20	SC Vac																	
21	SC Vac																	
22	SC Vac															6		
23	SC Vac																	
24	SC Vac										6							
25	SC Vac																	
26	SC Vac																	
27	SC Vac																	
28	SC Vac																	
29	SC Vac								6							6		
	1 - Depressio	on/Letl	nargy			6 - Serous oo	cular discharge		15 - Ex	cessive	e Saliva	tion		23 - 0 [.]	ther			
	3- Dehydrati	on				7 - Mild/Mo	derate mucopurulent		17 - Ict	eric Gu	ıms			* Icter	ic Lumb	ar only	/	
	4 - Mild/Mo	derate	Conjur	nctivitis		Ocular Disch	arge		20 - Pe	techial	Pain /			** Icte	eric lum	bar and	d ears	
	5 - Severe Co	onjunc	tivitis			13 - Vomitin	g		Ecchyr	notic				***- n	noribun	d and e	uthani	zation
				NO Clinic	al signs ob	oserved in any	group after 16DPC		22 - De	eath				DPC – D	Days pos	t challe	enge	

Study Type	Efficacy
Pertaining to	Canine Adenovirus Type II
Study Purpose	To demonstrate effectiveness against Canine Adenovirus Type II
	(CAV2)
Product Administration	Two doses were administered subcutaneously 21 days apart
Study Animals	Twenty-two (22) 6 week old puppies seronegative for CAV2
	were randomly sorted into one group of 11 SC vaccinates and
	one group of 11 controls.
Challenge Description	21 days after second vaccination all dogs were challenged with
	CAV2
Interval observed after	Puppies were observed for 21 days after challenge for clinical
challenge	signs.
Results	The study was considered satisfactory by the reduction in
	clinical signs and virus shedding in the vaccinates when
	compared to the control animals.
	Raw Data:
	Data tables are appended to the end of this summary
USDA Approval Date	April 3, 1998
USDA Appiovai Date	11pm 3, 1770

Dog	Group	ODPC	ODPC 1DPC 2DPC		3DPC	4DPC	SDPC	6DPC	7DPC	8DPC	9DPC	10DPC	11DPC	12DPC	13DPC1	4DPC1	5DPC1	5DPC17	DPC180	DPC19D	11DPd12DPd13DPd14DPd15DPd16DPd17DPd18DPd19DPd20DPd21DP0	21DPC
	Control						-	1,2		2	2				Γ	F	F	┢	┝	┝		
	Control						1	1,2	1,2	1,2	2											
	Control						1	1,2	1	1	1	1										
H	Control						1,2	1,2	1,2,4	1,2,	2											
	Control						1	1	1,4	1	1											
	Control					2		4			1									1		
	Control						1	1,2,4	1,2,4,5,6	1	1	2,4		1	1,2	1	1,2					
	Control		1	1,2	1,2	1	1,2	1,6	1	1	1	1		1			-	1		1		
6	Control							1	1	4	4											
9	Control					1	1	1	1	1	1,2			1								
11	Control					2		1,2	1,2	1	1	1										
23	S																					
	S																					
	S						1			1												
	S																					
27	S																					
38	S							1														
	S							1	1													
8	S		1	-	-	-	1	1	1	1		-		1	-			1		1	1	
	SC						1	1	1	1	1,2											
	S																					
33	S																					
		1-0ct	Ilar Di	1 - Ocular Discharge	U		3- Sneezing	zing			5 -Retching	hing			14	7-Inappetance	oetand	e				

Dog Group ODPC JDPC SDPC SDPC SDPC SDPC SDPC ISDPC ISDPC <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>g</th> <th>V2 Iso</th> <th>olatio</th> <th>n fror</th> <th>n Nas</th> <th>al Swa</th> <th>ıb San</th> <th>nples</th> <th>TCID</th> <th>CAV2 Isolation from Nasal Swab Samples (TCID₅₀/100uL)</th> <th>nr)</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							g	V2 Iso	olatio	n fror	n Nas	al Swa	ıb San	nples	TCID	CAV2 Isolation from Nasal Swab Samples (TCID ₅₀ /100uL)	nr)						
1 2 2.5 3.63 3.5 4.17 3.83 2.17 1 1 2 2 3 3 2.17 1 1 2 2 3 3 2.17 1 1 2 1 2 1 3 3 2.17 3.83 2.17 1 1 2 1 2 1 2 3 3 3 2 3 3 2 3 2 3 2 3 2 3 <	Dog	Group	ODPC		2DPC	3DPC	4DPC	SDPC	6DPC			9DPC 1	ODPC 1	1DPC 1	2DPC 1	3DPC 14	DPC 15D	PC 16D	PC 17DPC		19DPC	18DPC 19DPC 20DPC	21DPC
1 2 2.83 3.53 4.17 3.83 2.17 9 1 1 2.17 1 2.163 3.55 4.17 3.83 1.31 2.33 4.31 2.33 2.31 2.31 2.33 1.31 2.31 2.33 3.563 3.563 <t< td=""><td>1</td><td>Control</td><td></td><td></td><td></td><td>2</td><td>2.5</td><td>3.63</td><td>3.5</td><td><u>≤1.83</u></td><td></td><td></td><td></td><td>H</td><td>H</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	1	Control				2	2.5	3.63	3.5	<u>≤1.83</u>				H	H								
0 51.63 3.5 4.17 3.38 4.31 2.35 4.31 2.35 4.31 2.35 4.31 2.35 4.31 2.35 4.31 2.35 2.66 4.38 3.65 2.663 9.61 9.75 4.5 3.63 3.63 9.61 9.75 4.5 3.63 3.63 9.75 9.75 4.5 3.63 3.63 9.75	2	Control				2	2.83	3.5	3.83	2.17							512	83					
1 2.63 3.38 4.31 2.35 5.63 5.163 5.163 5.163 5.163 5.163 5.163 5.163 5.163 5.163 5.163 5.163 5.163 5.163	m	Control				s1.63	3.5	4.17	3.38							2	17						
2.38 2.6 4.38 3.6 2.6.5 3.63 9	4	Control					2.63	3.38	4.31	2.35			VI	c1.63									≤1.63
1 5183 4.5 3.63 3.63 3.63 3.63 3.63 3.17 1 <td>S</td> <td>Control</td> <td></td> <td></td> <td></td> <td>2.38</td> <td>2.6</td> <td>4.38</td> <td>3.6</td> <td>\$2.63</td> <td></td>	S	Control				2.38	2.6	4.38	3.6	\$2.63													
1 5163 2.75 4.5 51.83 51.83 51.83 51.83 51.83 51.83 51.83 51.83 51.83 51.83 51.83 52.83 53.83 54.83 </td <td>9</td> <td>Control</td> <td></td> <td></td> <td></td> <td>s1.83</td> <td>s1.83</td> <td>4.5</td> <td>3.63</td> <td>3.63</td> <td></td>	9	Control				s1.83	s1.83	4.5	3.63	3.63													
1 2.38 3.63 3.17 1	2	Control				£1.63	2.75	4.5	4.5	≤1.83													
1 51.63 2.83 4.38 4.38 4.38 4.38 4.38 4.38 4.38 5.5 5.1 <th< td=""><td>•••</td><td>Control</td><td></td><td></td><td></td><td>2.38</td><td>2.83</td><td>3.63</td><td>3.17</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	•••	Control				2.38	2.83	3.63	3.17														
1 51.63 2.17 3.63 3.5 4.38 5.163 2.163 <td>σ</td> <td>Control</td> <td></td> <td></td> <td></td> <td>\$1.63</td> <td>2.83</td> <td>2.83</td> <td>4.38</td> <td></td> <td>s1.83</td> <td></td> <td></td>	σ	Control				\$1.63	2.83	2.83	4.38												s1.83		
51.83 2.5 4.5 4.38 31.83 51.6	10	Control				s1.63	2.17		3.5				¥1		2.38	Ś	.83						
L6 2.38 2.38 500	11	Control				s1.83	2.5	4.5	4.38					VI	_	_		63	\$1.63	0	\$1.63		
1.6 2.38 1 <th></th>																							
1.6 2.38 2.38 1	23	SC												_		_			_				
63 51.63 2.63 51.63 51.63 63 2 2.63 51.63 51.63 63 2 2 2.63 51.63 51.63 63 2 2 2 2 51.63 51.63 64 2 2 2 2 2 51.63 51.63 7 2 51.83 2 2 2 51.63 51.63 51.63 7 2 51.83 2 2 2 2 51.63 51.63 51.63 7 2 51.83 2 2 2 2 2 51.63 51.6	24	SC		\$1.6				2.38															
63 2 63 2 63 2 63 2 63 2 63 2 63 2 63 2 63 2 63 2 63 2 63 2 <	25	Sc					\$1.63																
.63 .63 .21.63 .21.63 .05 .2 .21.83 .21.63 .21.63 .05 .2 .21.83 .21.63 .21.63 .05 .2 .21.83 .25 .21.63 .21.63 .05 .21.83 .25 .25 .21.63 .21.63 .05 .21.83 .25 .21.63 .21.63 .21.63 .05 .21.83 .25 .21.63 .21.63 .21.63 .05 .21.83 .25 .21.63 .21.63 .21.63 .05 .21.83 .25 .21.63 .21.63 .21.63 .21.63 .05 .21.83 .25 .21.63 <td< td=""><td>26</td><td>SC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.63</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>\$1.63</td></td<>	26	SC								2.63													\$1.63
1 2 \$1.83 1 \$1.63	27	sc		≤1.63											•	:1.63							
2 ≤1.83 ≤1.63 1 2 ≤1.83 ≤1.63 1 2 ≤1.63 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 1	28	Sc											s1.63										
L6 ≤1.83 2.63 2.5 ≤1.63	29	SC				2	≤1.83								vi	c1.63	12	63					
L6 ≤1.83 2.63 ≤1.	80	SC																					
1.6 \$1.83 2.63 2.5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	31	Sc													•	c1.63							
ted	32	SC		≤1.6			≤1.83	2.63	2.5														
Blank - No CAV2 titer detected	33	SC													Η		51.	63					
	Blank	- No CAV2	titer de	tected																			
DPC - Dave Post Challenge	-040	Davs Post	Challer																				

Study Type	Efficacy
Pertaining to	Canine Parainfluenza Virus
Study Purpose	To demonstrate effectiveness against Canine Parainfluenza Virus (CPI)
Product Administration	Two doses were administered by the subcutaneous (SC) route three (3) weeks apart
Study Animals	Nineteen (19) 6 week old puppies seronegative for CPI were randomly sorted into one group of 13 SC vaccinates and one group of 6 controls.
Challenge Description	21 days after second vaccination all dogs were challenged with CPI
Interval observed after challenge	Puppies were observed for 21 days after challenge for clinical signs. Blood and nasal swabs were collected during this period.
Results	The study was considered satisfactory based on the serologic response in vaccinates and the decrease in the number of days of virus shedding in vaccinates when compared to controls.
	Raw Data: Data tables are appended to the end of this summary
USDA Approval Date	March 16, 1998

CPI Serum Neutralization Antibody Titers

Control Animals

Dog	0DPV1	14DPV1	0DPV2	7DPV2	14DPV2 (w)	14DPV2	21DPV2	7DPC	14DPC	21DPC
1	<2	<2	<2	<2	<2	<2	<2	2	28	65
2	<2	<2	<2	<2	<2	<2	<2	1	99	182
3	<2	<2	<2	<2	<2	<2	<2	1	81	280
4	<2	<2	2	<2	<2	<2	<2	3	46	221
5	<2	<2	<2	<2	<2	<2	<2	2	71	289
6	<2	<2	<2	<2	<2	<2	<2	4	64	182

SC Vaccinates

Dog	0DPV1	14DPV1	0DPV2	7DPV2	14DPV2 (w)	14DPV2	21DPV2	7DPC	14DPC	21DPC
20	<2	<2	<2	<2	10	36	42	1248	7281	6295
21	<2	<2	<2	<2	3	16	6	2892	5880	4742
22	<2	<2	<2	<2	<2	18	6	1446	7037	3622
23	<2	<2	<2	<2	4	46	10	1152	10809	4581
24	<2	<2	<2	<2	<2	3	3	1579	4562	4096
25	<2	<2	<2	<2	<2	<2	<2	811	2884	10139
26	<2	<2	<2	<2	<2	<2	<2	227	793	661
27	<2	<2	<2	<2	<2	27	12	789	7079	5754
28	<2	<2	<2	<2	<2	<2	4	878	2253	2655
29	<2	<2	<2	<2	<2	16	5	1330	9462	7228
30	<2	<2	<2	<2	<2	3	3	373	1151	724
31	<2	<2	<2	<2	<2	<2	<2	2048	2281	2586
32	<2	<2	<2	2.2	<2	<2	3	1833	1193	880

DPV - Days Post Vaccination

DPC - Days Post Challenge

A titer of <2 is considered seronegative

						in us i.	Jointin		III IVU.	sai Sw	455				1
							Co	ontrol	S						
Do g	ODP C	1DP C	2DP C	3DP C	4DP C	5DP C	6DP C	7DP C	8DP C	9DP C	10DP C	11DP C	12DP C	13DP C	14DP C
1	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-
2	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-
3	-	+	+	+	+	+	+	-	+	-	-	-	-	-	-
4	-	+	+	+	+	+	+	-	+	-	-	-	-	-	-
5	-	+	+	+	+	+	+	+	-	-	-	-	-	-	-
6	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-
							SC V	accina	ates						
Do	0DP	1DP	2DP	3DP	4DP	5DP	6DP	7DP	8DP	9DP	10DP	11DP	12DP	13DP	14DP
g	С	С	С	С	С	С	С	С	С	С	C	C	С	C	С
20	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-
21	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-
22	-	+	+	+	+	+	-		+	-	-	-	-	-	-
23	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-
24	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-
25	-	+	+	+	+	+	-	-	+	-	-	-	-	-	-
26	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-
27	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-
28	-	+	+	+	+	+	+	-	+	-	-	-	-	-	-
29	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-
30	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-
31	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-
32	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-

CPI Virus Isolation from Nasal Swabs

- means CPI virus was not detected

+ means CPI virus was detected

Star day Tara a	Eff												
Study Type	Efficacy												
Pertaining to	Cannie Distemp												
Study Purpose	To demonstrate												
Product Administration	Two doses were	administered s	ubcutaneously 21	days apart									
Study Animals	Seventeen (17) 6	6 week old pup	pies seronegative f	or CDV were									
	randomly sorted	into one group	of 11 SC vaccinat	es and one									
	group of 6 contr	ols.											
Challenge Description	21 days after sec CDV.	cond vaccinatio	n all dogs were cha	allenged with									
Interval observed after challenge	Dogs were obser of CDV.	rved for 42 day	s after challenge fo	or clinical signs									
Results	The study was sa (b)(3) (i-ii)	atisfactory per	the criteria in 9 CF	R 113.306									
	Mortality Clinical Signs of CDV Infection												
	SC Vaccinates	0/11 (0%)	0/11 (0%)										
	Controls	5/6 (83%)	6/6 (100%)										
	Raw Data: Data tables are a	ppended to the	end of this summa	ury									
USDA Approval Date	April 6, 1998												

	10DPC	20	20	2,8,10,12	20	10,12	2,8,10,12													
	9DPC	20	20	1,8,10,11,12	2,8,17	2,10,12	2,10,12	31-42DPC	20	20	20	20		20	d word not	מ אבוב ווסר				
	8DPC	20	8,10,12,14,16,17,18, Euth	8,10,11,14	1,2,8,10,12	10,11	12,2	30DPC	20	20	20	20	10,12	20	abootities observed	micentricate minute scool abrications observed were not coortidated altaitat attant of CDV infortion	מוזא מו לעל ווווברנוטוו.			
CDV Clinical Signs Observed Post Challenge - Control Dogs	7DPC	10,12,16,17,Euth	14	14	10,12		11,12	28-29DPC	20	20	20	20		20	atomittant minor sto	memment minor su cossidored clinical si	רטוופומבובת רוווורפו פופוופ טו רת א ווווברנוטווי			
t Challeng	6DPC	2,12	1,2,10,12	12	10	10,12	2,10,12	27DPC	20	20	20	20	10,12	20						erved
bserved Pos	5DPC	10	2,10,12	10,12	2,10,12		2,10,12	16DPC-26DPC	20	20	20	20		20		Salivation	gum fits	scular Tics		Blank - No Clinical signs observed
cal Signs O	4DPC	10,11,12	10				2,12	15DPC	20	20	20	20	11,12	20	14 - Vomiting	16 - Excessive Salivation	17 - Chewing gum fits	18 - neuromuscular Tics	20 - death	Blank - No Cli
CDV Clini	3DPC	10,12,18	2,10,12	2,10,12	2,10,12			14DPC	20	20	1,8,9,10,12	20		20						
	2DPC	10,12,18						13DPC	20	20	8,10,11	20	2,11	20		2- Mild/Mod. Ocular Discharge Mucoid				
	1DPC							12DPC	20	20	1,8,10	20		1,2,8,12	on/Letharg)	1. Ocular Dis	ion	stool	loo	00
	ODPC							11DPC	20	20	8,10,12	20	8,10,12,14	1,2,8,10,12	1 - Depression/Lethargy	2- Mild/Mod	8 - Dehydration	10-Mucous stool	11-watery Stool	12-Bloodv stool
	Dog	1	2	3	4	5	9	Dog	1	2	3	4	5	9						

DPC – Day	's post-cha	llenge
-----------	-------------	--------

	Clinical Signs Observed Post Challenge - Vaccinated Dogs	Observ	ed Post	Challe	- agua	אפרר	וופרבר						
			SC Vaccinates	inates									
0DPC 1DPC 2DPC 3DPC 4DPC 5DPC 6DP	60PC 70PC 80PC 90PC 100PC 110PC 120PC 130PC 140PC 150PC 160PC 170PC 180PC 190PC 200PC 210PC	9DPC 1	10DPC 111	DPC 12D	DPC 131	DPC 140	DPC 15D	PC 16DP	C 17DP	C 18DP	C 19DPC	20DPC	21DPC
													10,12
					_	_			14				
				_	_			-			10		
					_	_							
				_									
									_				
												12	
									10,12	2 11,12	2 11,12	12	12
					-		_		10,12	~	10,12		
	14 - Vomiting	6				Inte	Intermittent minor stool abnormalities observed	tminor	stool ab	normal	ities obs	served	
2- Mild/Mod. Ocular Discharge Mucoid	16 - Excessive Salivation	ive Salive	ation			wei	were not considered clinical signs of CDV	nsidere	d clinica	il signs	of CDV		
	17 - Chewing gum fits	if mng Bu	ts			infe	infection.						
	18 - neuromuscular Tics	nuscular	Tics										
	20 - death												
	Blank - No Clinical signs observed	Clinical	signs obsi	erved									

DPC – Days post-challenge

		28DPC 29DPC 30DPC 31DPC 32DPC 33DPC 34DPC 35DPC 36DPC 36DPC 37DPC 38DPC 39DPC 40DPC 41DPC 42DPC													Intermittent minor stool abnormalities observed	s of CDV				
		9DPC 40D											12	-	abnorma	were not considered clinical signs of CDV				
		38DPC 3					14							-	inor stoo	dered cli				
2		37DPC											12		littent m	lot consi	on.			
COV CITICAI Signs Observed Fost Challenge - Vaccillated Dogs		C 36DPC													Interm	were r	infection.			
		C 35DP											12							
-		C 34DP									_		12							
agua		C 33DP(12							- arriard
	SC Vaccinates	32DP(Ц			tion	10	ICS		do ana
	SC Vac	31DPC														Salivat	gum fits	scular T		Blank - No Clinical cione obconed
Alaso		30DPC						12			10				14 - Vomiting	16 - Excessive Salivation	17 - Chewing gum fits	18 - neuromuscular Tics	ath	- No CI
		29DPC									10		10,12		14 - VG	16 - Ex	17 - Ch	18 - ne	20 - death	Anala
		28DPC						10				12								
		27DPC						10			10	10,11,12				p				
5		26DPC						10				10,12				e Muco				
		25DPC					10,12								PV	ischarg				
		22DPC 23DPC 24DPC 25DPC 26DPC										10,12	10,12		1 - Depression/Lethargy	2- Mild/Mod. Ocular Discharge Mucoid	-	o	-	
		23DPC											10,12		ression	/Mod. C	8 - Dehydration	10-Mucous stool	11-watery Stool	12.Bloody should
		22DPC	11					10				11,12	11		1 - Dep	2- Mild	8 - Deh	10-Muc	11-wat	12.Block
		Dog	18	19	20	21	22	23	24	25	26	27	28							

 $DPC-Days\ post-challenge$

Study Type	Efficacy
Pertaining to	Canine Parvovirus (CPV)
Study Purpose	To demonstrate effectiveness against CPV in 6-week-old
	puppies.
Product Administration	Two doses, given at an interval of 21 days, were administered
	subcutaneously (SC).
Study Animals	Study analysis was conducted on twenty-one 6-week-old puppies
	seronegative for CPV, 17 vaccinates and 4 non-vaccinated
	controls.
Challenge Description	Twenty-one (21) days after second vaccination puppies were
	challenged with CPV 2b strain.
Interval observed after	Puppies were observed daily for 14 days after challenge
challenge	
Results	The data were analyzed according to 9CFR 113.317
	Number affected by challenge according to 9CFR 113.317:
	Vaccinates: 0/17 (0%)
	Controls: 2/4 (50%)
	Raw data:
	Data table are appended to the end of this summary.
USDA Approval Date	August 31, 2001

Observations
Daily
Challenge
CPV Post

Non-Vaccinated Controls	7DPC 8DPC 9DPC 10DPC 11DPC 12DPC 13DPC 14DPC					
Non-Vac	5DPC 6DPC	E,H	B,C,H	D B,G,H	G,H B,C,D,F,G,H	
	3DPC 4DPC 5DPC			н		
	\vdash					
	0DPC 1DPC 2DPC	0				
	Dog 0DP	1	2	3	4	

							Vacc	Vaccinates							
Dog D	0DPC	1DPC	2DPC	3DPC	4DPC	SDPC	6DPC	7DPC	SDPC	9DPC	10DPC	11DPC	12DPC	13DPC	14DPC
1															
2															
3	٥						н				ш				
4															
5											٥				
9															
7												ш			
80															
6															
10										٥					
11		٥				٥									
12															
13			D												
14															
15															
16															
17															
B - Lethargy	argy		E - Wat	E - Watery Stool		H - Vomiting	iting	DPC	DPC = Days Post Challenge	ost Challé	enge				
C Dahu	C Dehvdration		F - Bloo	F - Rioody Stool		I - Doath									

l - Death F - Bloody Stool G - Anorexia C. Dehydration D - Mucous Stool

						Z	Non-Vaccinated Controls	inated C	ontrols						
Cat ID	0DPC	1DPC	2DPC	3DPC	4DPC	SDPC	6DPC	7DPC	SDPC	9DPC	10DPC	11DPC	12DPC	13DPC	14DPC
1	100.4	101.3	101.3	101.1	102.1	101.9	100.7	101.3	101.3	101.0	100.8	101.4	100.6	101.4	101.2
2	99.7	101.2	101.7	100.9	103.0	102.6	99.3	101.0	101.0	101.0	101.5	101.6	101.3	102.4	102.0
3	101.2	101.6	102.5	101.3	104.5	101.3	100.0	Na	Na	Na	Na	Na	Na	Na	Na
4	100.4	101.2	101.4	101.2	104.1	101.7	93.4	Na	Na	Na	Na	Na	Na	Na	Na

	13DPC 14DPC	101.3 101.8	101.3 102.1	101.4 100.8	100.9 102.3	101.3 101.8	102.7 102.0		\vdash	$\left \right $								
	12DPC	101.7	101.7	101.3	101.2	101.5	102.5		101.3	101.3 101.0	101.3 101.0 101.4	101.3 101.0 101.4 101.1	101.3 101.0 101.4 101.1 101.1	101.3 101.0 101.4 101.1 101.9 101.9	101.3 101.0 101.4 101.1 101.9 101.9 101.2	101.3 101.0 101.4 101.1 101.1 101.9 101.2 101.2 101.0	101.3 101.0 101.4 101.4 101.9 101.9 101.2 101.2 101.3	101.3 101.0 101.4 101.4 101.9 101.4 101.2 101.2 101.3 101.3
	11DPC	101.8	101.7	101.0	101.4	101.7	102.4		101.0	101.0 101.3	101.0 101.3 102.3	101.0 101.3 102.3 101.2	101.0 101.3 102.3 101.2 102.5	101.0 101.3 102.3 102.5 102.5 102.5	101.0 101.3 102.3 101.2 102.5 102.5 101.6 101.1	101.0 101.3 102.3 102.3 101.2 102.5 101.6 101.1 100.8	101.0 101.3 102.3 102.3 102.5 102.5 101.6 101.1 100.8 100.8	101.0 101.3 102.3 102.3 102.5 102.5 101.6 101.1 100.8 101.4 101.3
	10DPC	101.1	101.4	100.9	101.3	101.6	102.3		101.2	101.2 101.1	101.2 101.1 101.7	101.2 101.1 101.7 101.1	101.2 101.1 101.7 101.1 101.7	101.2 101.1 101.7 101.7 101.7 101.7 101.3	101.2 101.1 101.7 101.7 101.7 101.3 101.3	101.2 101.1 101.7 101.7 101.1 101.3 101.3 101.4	101.2 101.1 101.7 101.7 101.7 101.3 101.3 101.4 101.4 101.2	101.2 101.1 101.7 101.7 101.7 101.3 101.3 101.4 101.4 101.2 101.7
	9DPC	101.7	101.6	101.2	101.4	101.5	101.8		101.0	101.0	101.0 101.1 101.3	101.0 101.1 101.3 101.1	101.0 101.1 101.3 101.1 102.3	101.0 101.1 101.3 101.1 102.3 102.3	101.0 101.1 101.3 101.1 101.2 101.2 101.2	101.0 101.1 101.3 101.1 102.3 101.2 101.2 101.3	101.0 101.1 101.1 101.1 101.2 101.2 101.3 101.4 101.8	101.0 101.1 101.1 101.1 101.2 101.3 101.3 100.4 101.8 101.8
s	SDPC	101.5	101.7	101.4	101.7	101.3	101.5		101.3	101.3 101.1	101.3 101.1 101.5	101.3 101.1 101.5 101.1	101.3 101.1 101.5 101.1 102.3	101.3 101.1 101.5 101.1 102.3 102.3	101.3 101.1 101.5 101.1 102.3 101.0 101.0	101.3 101.1 101.5 101.1 102.3 101.0 101.1 101.1	101.3 101.1 101.5 101.5 101.1 101.0 101.0 100.7 100.7	101.3 101.1 101.1 101.1 101.3 102.3 101.0 101.0 101.4 101.4
Vaccinates	7DPC	101.0	101.3	100.5	101.3	101.1	101.4		101.2	101.2	101.2 101.0 100.9	101.2 101.0 100.9 100.9	101.2 101.0 100.9 100.9 101.5	101.2 101.0 100.9 100.9 101.5 101.5	101.2 101.0 100.9 100.9 101.5 101.5 101.7	101.2 101.0 100.9 100.9 101.5 101.5 101.7 101.7 100.7	101.2 101.0 100.9 100.9 101.5 101.5 100.7 100.7 100.7	101.2 101.0 100.9 100.9 101.5 101.7 100.7 100.7 100.7 100.7 100.7
Š	6DPC	101.0	101.5	100.6	101.3	101.3	101.1	0 0 0 0	100.8	100.8 100.9	100.8 100.9 101.1	100.8 100.9 101.1 100.6	100.8 100.9 101.1 100.6 101.8	100.8 100.9 101.1 100.6 101.8 101.3	100.8 100.9 101.1 100.6 101.8 101.3 100.3	100.8 100.9 101.1 100.6 101.8 101.3 100.3 100.3	100.8 100.9 101.1 101.8 101.8 101.3 101.3 101.3 101.5 101.5	100.8 100.9 101.1 101.3 101.3 101.3 101.3 101.5 100.3 100.8 100.8
	SDPC	101.5	101.5	101.1	101.1	101.0	101.6	0.001	T00.8	101.3	101.8 101.3 101.0	101.8 101.3 101.0 101.2	101.3 101.3 101.0 101.2 102.2	101.3 101.3 101.0 101.2 102.2 101.8	100.8 101.3 101.0 101.2 102.2 101.8 101.5	101.8 101.3 101.0 101.2 101.2 101.8 101.5 101.4	101.8 101.3 101.0 101.2 102.2 101.8 101.8 101.4 101.4	101.8 101.3 101.0 101.2 102.2 101.8 101.8 101.4 101.4 101.4 101.4
	4DPC	101.7	101.1	101.3	101.4	101.2	102.0	100 0	1.001	101.1	101.1	101.1 101.2 101.2	101.1 101.2 101.2 102.1	101.1 101.2 101.2 102.1 102.1 101.4	101.1 101.2 101.2 101.2 102.1 101.4 101.0	101.1 101.2 101.2 102.1 102.1 101.4 101.0 101.0	101.1 101.2 101.2 101.2 101.4 101.0 101.0 101.0	101.1 101.2 101.2 101.2 101.4 101.0 101.0 101.0 101.6
	3DPC	101.3	101.3	100.8	101.7	101.5	101.5	101.2		101.1	101.1 101.0	101.1 101.0 101.4	101.1 101.0 101.4 101.8	101.1 101.0 101.4 101.8 101.5	101.1 101.0 101.4 101.8 101.5 101.3	101.1 101.0 101.4 101.8 101.5 101.3 101.3	101.1 101.0 101.4 101.8 101.5 101.3 101.4 101.4 101.0	101.1 101.0 101.4 101.8 101.5 101.3 101.4 101.4 101.7
	2DPC	101.2	101.5	101.0	101.4	101.4	102.1	101.0		101.5	101.5 102.1	101.5 102.1 101.6	101.5 102.1 101.6 10.2	101.5 102.1 101.6 10.2 101.4	101.5 102.1 101.6 101.4 101.4 101.8	101.5 102.1 101.6 101.4 101.8 101.8 101.0	101.5 102.1 101.6 101.4 101.4 101.8 101.0 101.0	101.5 102.1 101.6 101.4 101.4 101.0 101.0 101.1 101.1
	1DPC	101.9	100.5	100.5	100.9	101.0	101.9	100.8	Ī	100.7	100.7 101.6	100.7 101.6 100.8	100.7 101.6 100.8 101.5	100.7 101.6 100.8 101.5 102.2	100.7 101.6 100.8 101.5 102.2 102.2	100.7 101.6 100.8 101.5 102.2 100.4 101.1	100.7 101.6 100.8 101.5 102.2 100.4 101.1 101.1	100.7 101.6 100.8 101.5 101.5 102.2 102.2 101.1 101.1 101.2
	0DPC	101.1	101.1	101.0	100.7	101.0	101.3	100.5	Ī	99.7	99.7 100.5	99.7 100.5 101.3	99.7 100.5 101.3 101.3	99.7 100.5 101.3 101.3 100.9	99.7 100.5 101.3 101.3 101.3 99.9	99.7 100.5 101.3 101.3 100.9 99.9	99.7 100.5 101.3 101.3 101.3 100.9 99.9 99.7 99.7	99.7 100.5 101.3 101.3 101.3 100.9 99.9 99.7 100.7 100.9
	Cat ID	5	9	7	8	6	10	11		12	12	12 13 14	12 13 14 15	12 13 14 15 16	12 13 14 15 15 16 17	12 13 14 15 16 17 17 18	12 13 14 15 15 17 17 19 19	12 14 15 16 16 17 17 18 18 20

Daily Rectal Temperature (°F)

ļ

	10DPC	10.3	12.9	Na	Na	
	9DPC	10.5	9.0	Na	Na	
	8DPC	9.7	10.0	Na	Na	
	7DPC	9.0	7.5	Na	Na	
trols	6DPC	8.2	13.0	13.7	0.3	
Non-Vaccinated Controls	SDPC	13.9	12.7	15.6	6.3	
h-Vaccina	4DPC	11.2	17.0	30.2	19.9	
Nor	3DPC	11.5	11.7	Na	17.4	
	2DPC	13.2	14.4	23.0	17.4	
	1DPC	10.7	12.3	18.0	18.4	
	0DPC	12.3	9.9	20.6	14.7	
	Cat ID	1	2	3	4	

SDPC 9DPC 10DPC
_
9.18
r ;
2 L
CLUC
Cat ID

Total White Blood Cell Counts (x1000/uL)

	Vaccinates	DPC 2DPC 3DPC 4DPC 5DPC 6DPC 7DPC 8DPC	<1.5 <1.5 <1.5 <1.5 NS <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	<1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	<1.5 <1.5 <1.5 <1.5 NS <1.5 <1.5 <1.5	415 415 415 415 415 415 415 415	415 415 415 415 415 415 415 415	<1.5 <1.5 <1.5 <1.5 <1.5 NS <1.5 <1.5 <1.5	415 415 415 415 415 415 415 415	415 415 415 415 415 415 415 415	415 415 415 415 415 415 415 415	415 415 415 415 415 415 415 415	415 415 415 415 415 415 415 415	<1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	4.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1	415 415 415 415 415 415 415 415 415	<1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	<15 <15 <15 <15 MS <15 <15 <15 <15 <15 <15 <15 <15 <15 <15
CPV Titer From Fecal Material (Log FAID ₅₀ /mg Feces) Non-Vaccinated Controls C 1DPC 2DPC 3DPC 4DPC 5DPC 6DPC 7DPC 5 <1.5	Va	3DPC	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<15
00PC 415 415 415		0DPC 1DPC	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	<1.5 <1.5	45 45

<1.5 is considered negative NS = No sample DPC = Days Post Challenge

55 £ <u>5</u>5

415 55 55

<1.5 41.5 4.5

<u>1</u>5 <u>1</u>5 <u>1.5</u>

41.5 NS 415

45 415

<1.5 <u>5</u> 41.5

<1.5 <u>4</u>5 415

55 £

415 45 45

51

41.5

Study Type	Efficacy
Pertaining to	Canine Parvovirus (CPV)
Study Purpose	To demonstrate effectiveness against CPV
· · ·	č
Product Administration	Two doses given at an interval of 28 days were administered
	subcutaneously (SC).
Study Animals	6-week old puppies seropositive for parvovirus, 20 vaccinates
	and 5 non-vaccinated controls.
Challenge Description	Fifty-six days (56) after second vaccination puppies were
	challenged with CPV type 2c strain.
Interval observed after	Puppies were observed for clinical signs daily for 14 days after
challenge	challenge
Results	Dogs were determined affected by the criteria of 9CFR
Itesuites	113.317(c)(3)(i)
	Number affected:
	Vaccinates: $1/20 (5\%)$
	Controls: 4/5 (80%)
	Requirements of 9CFR 113.317 (c)(3)(i) were met.
	Raw data:
	Data tables are appended to the end of this summary.
USDA Approval Date	January 31, 2012

1 - Mucous Stool 2-Diarrhea	28	24	23	22	20	18	17	16	15	14	13	10	8	7	9	ъ	4	з	2	-	DogID		!	27	21	19	=	9	Dog ID	
1 - Mucous Stool 2-Diarrhea (Watery stool)			1										1				1				0DPC								ODPC	
V stool)																					1DPC								1DPC	
																					2DPC								2DPC	
3-Bloody Stool 4 -Death																					3DPC								3DPC	
y Stool																					4DPC								4DPC	4
																					SDPC					,	1,2,3	1.2.3	SDPC	
Blank - 1																					6DPC	Va					1,2,3	1.2.3	6DPC	Non-Vaccinated Controls
Blank - No clinical signs observed																					7DPC	Vaccinates		,	2.3	14	1,2,3	1.2.3	7DPC	inated Co
l signs ol							1														8DPC				1.3	1	2,3	2.3.4	SDPC	ontrols
oserved							2														9DPC							Na	9DPC	
																		1			10DPC							Na	10DPC	ľ
																					11DPC							Na	11DPC	
																					12DPC							Na	12DPC	
									1											1,3	13DPC							Na	13DPC	
								1													14DPC							Na	14DPC	

DPC - Days Post Challenge

		Dog ID -24DPV1 0DPV1	9 724 8	11 91 4	19 23 64	<2	27 10 8		Dog ID -24DPV1 0DPV1				4 153 64		2048	2048 1024	2048 1024 1448	2048 1024 1448 512	2048 1024 1448 512 128	2048 1024 1448 512 128 181	2048 1024 512 128 181 32	2048 1024 1448 128 128 181 32 23	2048 1024 1448 1448 128 181 32 23 8	2048 1024 1448 128 128 181 32 23 8 8 32	2048 2048 1024 1448 512 128 181 32 23 23 8 8 32 16	2048 1024 1448 512 128 181 32 23 23 23 181 181 32 23 16 16 45	2048 1024 1024 512 128 181 32 23 23 23 23 45 45	2048 1024 1024 512 128 181 32 23 8 8 8 32 23 23 23 181 181 181 181 32 23 23 23 23 45 45 22	2048 1024 1024 512 128 181 32 23 8 8 32 32 16 16 45 45 4
		1 7PV1	4	3	23	10	6		1 7PV1	8	23	23	с С	57	16	16 23	4 23	4 8	23 16 8 64	64 6 6 6 6 6 6 6 6 6	64 8 4 23 16 64 8 4 5	2 16 64 8 4 23 16 5	11 2 16 64 8 4 23 16 5	23 23	19 12 16 6 4 8 4 23 16 5	4 19 23 11 2 16 6 4 8 4 23 6 5	8 4 19 23 1 2 6 6 8 4 23 6 6 8 4 10	1 <td>4 11 8 4 19 23 1 2 16 64 8 4 23 6 5</td>	4 11 8 4 19 23 1 2 16 64 8 4 23 6 5
Serum Neutrlization Titer	Non-Vaccinated Controls	28DPV1 (0DPV2)	<2	<2	<2	<2	~2	Vaccinates	28DPV1 (0DPV2)	<2	<2	2	~2		~2	~2	2 2 2	~ ~ ~	2	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	2	2	2	2	2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2	2	
zation Titer	d Controls	41DPV1	<2	<2	<2	<2	2	ates	41DPV1	1024	362	1024	724		45	<2 45	45 <2 1024	45 <2 1024 <2	45 1024 <2	45 <2 <2 <2 45	45 1024 45 45	45 <2 1024 <2 <2 45 512	45 1024 2 512 2	45 1024 2 2 512 2 2	45 1024 2 2 45 45 512 512	45 1024 2 2 45 45 512 512 512 724	45 1024 2 45 45 512 512 512 512 45 512 45 512 512 45	45 1024 2 2 2 45 45 512 512 512 512 512 44 1448	45 1024 2 2 2 45 45 512 512 512 512 512 724 1448 1448
		56DPV1	<2	<2	<2	<2	2		56DPV1	11585	6871	5793	10531	13224	4096	4096 512	4096 512 8192	19534 4096 512 8192 2896	19534 4096 512 8192 2896 2896 11585	19334 4096 512 8192 2896 11585 2048	19534 4096 512 8192 2896 11585 2048 2896	19534 4096 512 8192 2896 11585 2048 2896 2896 11585	19534 4096 512 8192 2896 11585 2048 2896 11585 2048 2896 11585 9767	19534 4096 512 8192 2896 11585 2048 2896 11585 9767 11585	19334 4096 512 8192 2896 11585 2048 2896 11585 11585 21585 21585 21585 21585 21585	19534 512 8192 2896 11585 2048 2048 2048 2048 21585 9767 11585 9767 11585 8192	19334 512 8192 2896 11585 2048 2048 2048 2048 21585 9767 11585 9767 11585 8192 8192	19534 512 8192 2896 11585 2048 2048 2048 2896 11585 9767 11585 9767 11585 9767 11585 9767 11585 8192 8192 NO TEST	19334 4096 512 8192 2896 11585 2048 2896 11585 9767 11585 9767 11585 23170 8192 8192 8192 8192 8192
		70DPV1	<2	<2	<2	<2	2		70DPV1	11585	16384	5793	23170	0100	2010	2896	2896 8192	8192 2896 8192 11585	2896 2896 8192 11585 11585	2896 2896 8192 11585 11585 5793	2896 2896 11585 11585 5793 4884	2896 2896 8192 11585 11585 5793 4884 11585	2896 2896 8192 11585 11585 5793 4884 11585 11585	2896 2896 8192 11585 11585 5793 4884 11585 11585 8192	2896 2896 8192 11585 11585 5793 5793 4884 11585 11585 8192 11585	2896 2896 8192 11585 11585 5793 5793 5793 4884 11585 11585 11585 8192 11585 11585	2896 2896 11585 11585 5793 5793 5793 4884 11585 11585 8192 8192 11585 11585	2896 2896 8192 11585 11585 5793 5793 5793 4884 11585 8192 11585 11585 11585 11585 11585 11585	2896 2896 8192 11585 11585 5793 5793 4884 11585 8192 11585 8192 11585 11585 11585 16384 16384 23170
		84DPV1 (0DPC)	<2	<2	<2	<2	~2		84DPV1 (0DPC)	=>23170	16384	6871	=>46341	22170	21157	9767	23110 9767 =>23170	223170 9767 =>23170 =>46341	23170 9767 =>23170 =>46341 11585	9767 =>23170 =>46341 11585 8192	9767 =>23170 =>46341 11585 8192 11585	9767 =>23170 =>46341 11585 8192 11585 16384	9767 =>23170 =>46341 11585 8192 11585 16384 23170	9767 =>23170 =>46341 11585 8192 11585 16384 23170 16384	9767 =>23170 =>46341 11585 8192 11585 16384 23170 16384 11585	9767 =>23170 =>46341 11585 16384 16384 16384 16384 11585 11585	9767 =>23170 =>46341 11585 16384 16384 23170 16384 11585 11585 11585 8192	9767 =>23170 =>46341 11585 8192 11585 16384 23170 16384 11585 11585 8192 11585	$\begin{array}{r} 25000 \\ 9767 \\ =>23170 \\ =>46341 \\ 11585 \\ 8192 \\ 11585 \\ 16384 \\ 23170 \\ 16384 \\ 11585 \\ 11585 \\ 11585 \\ 11585 \\ 16384 \end{array}$

0.97 2.04	0.84 1.40	2F F 10 V	3.05	1.83 2.11 3.80 3.05	2.06 2.82 1.83 2.11 3.80 3.05	2.25 2.14 2.06 2.82 1.83 2.11 3.80 3.05	1.68 2.54 2.25 2.14 2.06 2.82 1.83 2.11 3.80 3.05	2.21 2.30 1.68 2.54 2.25 2.14 2.06 2.82 1.83 2.11 3.80 3.05	2.17 2.24 2.21 2.30 1.68 2.54 2.25 2.14 2.06 2.82 1.83 2.11 3.80 3.05	1.26 2.25 2.17 2.24 2.21 2.30 1.68 2.54 2.25 2.14 2.26 2.82 1.83 2.11 3.80 3.05 3.80 3.05	2.74 2.80 1.26 2.25 2.17 2.24 2.21 2.30 1.68 2.54 2.25 2.14 2.26 2.82 1.83 2.11 3.80 3.05	2.07 1.89 2.74 2.80 1.26 2.25 2.17 2.24 2.21 2.30 1.68 2.54 2.25 2.14 2.26 2.82 1.83 2.11 3.80 3.05	1.23 1.22 2.07 1.89 2.74 2.80 1.26 2.25 2.17 2.24 2.21 2.30 1.68 2.54 2.25 2.14 2.26 2.14 3.80 3.05 3.80 3.05	1.43 1.84 1.23 1.22 2.07 1.89 2.74 2.80 1.26 2.25 2.17 2.24 2.217 2.30 1.68 2.54 2.25 2.14 2.26 2.14 2.80 2.11 3.80 3.05 0.04 4.45	0.62 0.96 1.43 1.84 1.23 1.22 2.07 1.89 2.74 2.80 1.26 2.25 2.17 2.24 2.217 2.30 1.68 2.54 2.25 2.14 2.26 2.14 2.230 2.14 2.26 2.11 3.80 3.05 0.64 4.46	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	D -2DPC -1DPC (3.05 3.06 3.06 3.06 2.45 2.50 2.50 3.06 1.10 1.59 2.40 1.59 0.62 0.96 1.84 1.23 1.22 2.07 1.89 2.74 2.80 1.22 2.74 2.80 1.26 2.25 2.24 2.217 2.230 1.68 2.25 2.14 2.25 2.14 2.30 3.80 3.05 3.05 3.80 3.05 3.05 3.05 3.05 3.05 3.05	-2DPC -1DPC 3.05 3.06 2.45 2.50 2.09 2.40 1.10 1.59 0.62 0.96 1.23 1.22 2.07 1.89 2.74 2.80 2.74 2.80 2.74 2.80 2.77 1.89 2.77 2.24 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.126 2.25 2.14 2.30 2.82 2.11 3.80 3.05 0.8.0 3.05	2.68 2.26 -2DPC -1DPC 3.05 3.06 2.45 2.50 2.09 2.40 1.10 1.59 1.23 1.22 2.74 2.80 2.77 1.89 2.74 2.80 1.26 2.25 2.17 2.24 2.217 2.24 2.25 2.14 2.25 2.14 2.26 2.82 1.83 2.11 3.80 3.05	1.67 2.19 2.68 2.26 -2DPC -1DPC 3.05 3.06 2.45 2.50 2.09 2.40 1.10 1.59 0.62 0.96 1.23 1.23 2.74 2.80 2.74 2.80 2.74 2.80 2.74 2.80 2.74 2.80 2.77 1.89 2.77 2.24 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.77 2.80 2.126 2.25 2.14 2.30 2.82 2.11 3.80 3.05 0.8.0 3.05	1.57 2.14 1.67 2.19 2.68 2.26 3.05 3.06 2.45 2.50 2.45 2.50 2.45 2.68 1.43 1.59 0.62 0.96 1.23 1.22 2.74 2.80 2.17 2.24 2.217 2.24 2.217 2.24 2.25 2.14 2.26 2.25 2.17 2.24 2.217 2.24 2.25 2.14 2.26 2.254 2.26 2.14 2.26 2.14 2.26 2.14 2.80 2.82 1.83 2.11 3.80 3.05 0.84 4.46	2.24 2.59 1.57 2.14 1.67 2.19 2.68 2.26 3.05 3.06 2.45 2.50 2.09 2.40 1.43 1.59 0.62 0.96 1.23 1.22 2.74 2.80 2.74 2.80 1.26 2.25 2.17 2.24 2.217 2.30 1.26 2.25 2.17 2.24 2.217 2.30 1.88 2.54 2.206 2.82 1.83 2.11 3.80 3.05 3.80 3.05	1.24 1.20 2.24 2.59 1.57 2.14 1.67 2.19 2.68 2.26 3.05 3.06 2.45 2.50 2.09 2.40 1.10 1.59 1.23 1.22 2.07 1.89 2.17 2.24 2.17 2.24 2.217 2.24 2.217 2.24 2.217 2.24 2.25 2.14 2.25 2.14 1.23 1.22 2.17 2.80 1.23 2.24 2.17 2.230 1.84 2.25 2.17 2.30 1.83 2.14 2.26 2.14 2.82 2.14 2.80 2.82 1.83 2.11 3.80 3.05 0.84 4.46	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
+	1.51 1.27			+																		┽┼┼┼┼┼┼┼┼┼┼╢┥│┝					┼┼┼┼┼┼┼┼┼┼┼╢┤│┝┼┼┼┼╢┤
	7 1.63																										
	1.35	3.18	2.22		2.48	2.84 2.48	2.08 2.84 2.48	2.81 2.08 2.84 2.48	3.62 2.81 2.08 2.84 2.48	1.88 3.62 2.81 2.08 2.84 2.84 2.48	2.43 1.88 3.62 2.81 2.84 2.84 2.84 2.48	1.93 2.43 1.88 3.62 2.81 2.81 2.84 2.84 2.84	1.51 1.93 2.43 1.88 3.62 2.81 2.81 2.84 2.84 2.48	1.55 1.51 1.93 2.43 1.88 1.88 3.62 2.81 2.81 2.81 2.84 2.84	1.32 1.55 1.51 1.93 2.43 1.88 3.62 2.81 2.81 2.81 2.84 2.84 2.84	2.45 1.32 1.55 1.51 1.93 2.43 1.88 3.62 2.81 2.81 2.81 2.81 2.84 2.84	2.46 2.45 1.32 1.55 1.51 1.51 1.93 2.43 1.88 3.62 2.81 2.81 2.84 2.84	3.05 2.46 2.45 1.32 1.55 1.51 1.93 2.43 1.88 3.62 2.81 2.81 2.84 2.84	+ + + + + + + + + + + + + + + + + + +		<u> </u>						
F 2 C	1.47	3.38	2.39	P.0P	C9 C	2.62	3.35 2.62 2.62	3.04 3.35 2.62 2.62	3.76 3.04 3.35 2.62 2.62	2.57 3.76 3.04 3.35 2.62 2.62	2.56 2.57 3.76 3.04 3.35 2.62 2.62	1.78 2.56 2.57 3.76 3.04 3.35 2.62 2.62	1.53 1.78 2.56 2.57 3.76 3.04 3.35 2.62 2.62	1.16 1.53 1.78 2.56 2.57 3.76 3.04 3.35 2.62 2.62	1.14 1.16 1.53 1.78 2.56 2.57 3.76 3.76 3.35 2.62	2.91 1.14 1.16 1.53 1.78 2.56 2.57 3.76 3.76 3.35 2.62	2.32 2.91 1.14 1.16 1.53 1.53 1.78 2.56 2.57 3.76 3.35 2.62	3.27 2.32 2.91 1.14 1.16 1.53 1.53 1.53 2.56 2.57 3.76 3.35 2.62 2.62				┽┼┼┼┼┼┼┼┼┼┼╢┥┈║┝─					┼┼┼┼┼┼┼┼┼╢┥╵║┝┼┼┼┼╢┥
2.03	1.45	3.75	2.50	3.05		2.93	2.83 2.93	2.85 2.93	3.28 2.85 2.93	2.39 3.28 2.85 2.93	3.01 2.39 3.28 2.85 2.83 2.93	1.52 3.01 2.39 3.28 2.85 2.83 2.93	1.68 1.52 3.01 2.39 3.28 2.85 2.83 2.93	1.79 1.68 1.52 3.01 2.39 3.28 3.28 2.85 2.83 2.93	1.26 1.79 1.68 1.52 2.39 2.39 3.28 2.85 2.85 2.83	2.03 1.26 1.79 1.68 1.52 3.01 2.39 3.28 3.28 2.85 2.85 2.83	1.65 2.03 1.26 1.79 1.68 1.52 3.01 2.39 3.28 3.28 2.85 2.85 2.83	3.03 1.65 2.03 1.26 1.79 1.52 1.52 3.28 3.28 2.85 2.85 2.83	2.39 3.03 1.65 2.03 1.26 1.79 1.68 1.79 1.68 1.52 2.39 3.28 2.85 2.85 2.83	4DPC 2.39 3.03 1.65 2.03 1.26 1.79 1.79 1.68 1.52 3.01 2.39 3.28 3.28 2.85 2.85	4DPC 2.39 3.03 1.65 2.03 1.26 1.79 1.68 1.79 1.52 3.01 2.39 3.28 2.85 2.85	0.92 4DPC 2.39 3.03 1.65 2.03 1.26 1.79 1.79 1.52 3.01 2.39 3.28 3.28 2.85 2.85 2.85 2.83	1.17 0.92 4DPC 2.39 3.03 1.65 1.26 1.79 1.68 1.79 1.68 1.52 2.39 2.39 3.28 2.85 2.85 2.85	1.42 1.17 0.92 2.39 2.39 3.03 1.65 2.03 1.65 1.79 1.79 1.68 1.52 1.52 1.52 3.01 2.39 3.28 3.28 2.85 2.85	0.29 1.42 1.17 0.92 2.39 2.39 3.03 1.65 2.03 1.65 1.79 1.79 1.52 1.52 1.52 3.01 2.39 3.28 3.28 2.85 2.85	0.30 0.29 1.42 1.47 0.92 0.92 1.67 2.39 1.65 2.03 1.26 1.79 1.52 1.52 3.01 1.52 3.28 2.85 2.85 2.85 2.93	4DPC 0.30 1.42 1.42 1.47 0.92 0.92 1.65 1.65 1.20 1.65 1.20 1.65 1.79 1.65 1.26 1.79 1.65 1.26 1.79 1.65 2.39 2.39 3.01 2.39 3.28 5.285 2.85 2.85
2.03	1.29	2.36	1.73	3.04	P.00	08 0	2.35	2.98 2.35	3.07 2.98 2.35	2.57 3.07 2.35 2.60	2.65 2.57 3.07 2.98 2.35	1.64 2.65 2.57 3.07 2.35 2.35	1.52 1.64 2.65 2.57 3.07 2.35 2.35	1.62 1.52 1.64 2.65 2.57 2.98 2.35 2.35	1.19 1.62 1.52 2.65 2.57 2.98 2.98 2.98	2.75 1.19 1.62 1.52 1.52 2.65 2.57 2.57 2.57 2.57 2.57 2.57 2.57 2.5	1.73 2.75 1.19 1.62 1.62 1.62 1.62 1.64 2.65 2.57 2.57 2.98 2.98 2.98	2.73 1.73 2.75 1.19 1.62 1.62 1.52 1.52 1.52 2.57 2.57 2.57 2.98 2.98	2.66 2.73 1.73 2.75 1.19 1.62 1.62 1.62 1.64 2.65 2.65 2.57 2.98 2.98	5DPC 2.66 2.73 1.73 2.75 2.75 1.19 1.62 1.52 1.52 1.52 2.57 2.57 2.57 2.98 2.65	5DPC 2.66 2.73 1.73 1.73 1.73 1.62 1.62 1.62 1.62 1.62 1.64 2.65 2.65 2.98 2.98	1.00 5DPC 2.66 2.73 1.73 1.73 2.75 1.62 1.62 1.62 1.52 1.52 2.65 2.57 2.57 2.98 2.35	0.67 1.00 5DPC 2.66 2.73 1.73 1.73 1.73 1.73 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62	0.70 0.67 1.00 5DPC 2.66 2.73 1.73 1.73 1.73 1.73 1.73 1.73 1.73 2.75 1.62 1.62 1.62 1.62 1.52 1.52 1.52 2.65 2.65 2.65 2.65 2.65 2.65 2.65 2.57 3.07 2.98 2.55	0.58 0.70 0.67 1.00 2.66 2.73 1.73 2.75 2.75 1.52 1.52 1.52 1.52 2.57 2.57 2.57 2.57 2.57 2.55 2.55 2	0.28 0.58 0.70 0.67 1.00 2.66 2.73 1.73 1.73 2.75 1.62 1.62 1.52 1.52 1.52 1.52 1.52 2.65 2.57 2.57 2.98 2.35	5DPC 0.28 0.70 0.67 1.00 2.73 2.73 1.73 1.73 1.52 1.52 1.52 1.52 1.52 1.52 1.52 2.75 2.57 2.57 2.57 2.57 2.57 2.98 2.56 2.58
242	1.72	2.42	1.98	3.98	0.04	ru c	3.13	3.29	3.66 3.29 3.13	3.09 3.66 3.13	2.44 3.09 3.29 3.13	2.52 2.44 3.09 3.26 3.29 3.13 3.13	1.81 2.52 2.44 3.66 3.29 3.13 3.13	2.44 1.81 2.52 2.44 3.09 3.29 3.13 3.13	1.57 2.44 1.81 2.52 2.44 3.09 3.13 3.13	2.34 1.57 2.44 1.81 2.52 2.52 2.44 3.09 3.29 3.13 3.13	2.38 2.34 1.57 2.44 1.81 2.52 2.44 3.09 3.13 3.13	3.20 2.38 2.34 1.57 2.44 1.81 2.52 2.44 3.09 3.13 3.13	3.31 3.20 2.38 2.34 1.57 2.44 1.81 2.52 2.44 3.09 3.13 3.13	6DPC 3.31 3.20 2.38 2.34 1.57 2.44 1.81 2.52 2.44 3.09 3.13 3.13	6DPC 3.31 3.20 2.38 2.34 1.57 2.44 1.81 2.52 2.44 1.81 2.52 2.44 3.09 3.13 3.13	1.09 6DPC 3.31 3.20 2.38 2.34 1.57 2.44 1.57 2.44 1.57 2.44 1.81 2.52 2.52 2.44 3.09 3.13 3.13	1.75 1.09 1.09 3.31 3.20 2.38 2.38 2.38 2.34 1.57 2.44 1.81 2.52 2.44 1.81 2.52 2.44 3.09 3.13 3.13	1.59 1.75 1.09 1.09 2.32 2.34 2.34 2.34 1.57 2.44 1.81 2.52 2.44 1.81 2.52 2.44 3.09 3.13 3.13	0.69 1.59 1.75 1.09 1.09 3.31 3.31 3.31 2.34 1.57 2.44 1.57 2.44 1.57 2.44 1.57 2.44 1.57 2.44 1.57 2.44 3.09 3.13 3.13	0.74 0.69 1.59 1.75 1.09 1.09 1.09 1.09 2.33 2.33 1.57 2.34 1.57 2.34 1.57 2.44 1.81 2.52 2.44 1.81 2.52 2.44 3.09 3.13 3.13	6DPC 0.74 0.69 1.59 1.75 1.09 1.75 1.09 1.75 1.09 2.38 2.34 2.38 2.34 1.57 2.44 1.57 2.44 1.81 2.52 2.44 1.81 2.52 2.44 3.09 3.13 3.04
31 C	1.53	3.93	2.12	3.27	2.78	~ ~ ~	2.90	2.51	4.10 2.51 2.90	3.22 4.10 2.51 2.90	2.65 3.22 4.10 2.51 2.90	2.23 2.65 3.22 4.10 2.90	0.22 2.23 2.65 2.65 3.22 4.10 2.90	1.97 0.22 2.23 2.65 3.22 3.22 4.10 2.51 2.51	1.49 1.97 0.22 2.23 2.65 2.65 3.22 4.10 2.90	2.41 1.49 1.97 0.22 2.23 2.65 2.65 3.22 4.10 2.90	2.16 2.41 1.49 1.97 0.22 2.23 2.65 3.22 3.22 4.10 2.51 2.51	3.23 2.16 2.41 1.49 1.97 0.22 2.23 2.65 3.22 3.22 3.22 4.10 2.51	2.57 3.23 2.16 2.41 1.49 1.97 0.22 0.22 3.22 3.22 3.22 3.22 2.51 2.51	7DPC 2.57 3.23 2.16 2.41 1.49 1.97 1.97 2.23 2.23 2.251 2.51 2.51	7DPC 2.57 3.23 2.16 2.41 1.49 1.97 1.97 2.65 3.22 3.22 3.22 3.22 4.10 2.51 2.51	2.04 7DPC 2.57 2.57 2.41 2.41 1.49 1.49 1.97 2.23 2.23 2.23 2.251 2.51 2.51	2.03 2.04 2.04 7DPC 2.57 2.57 2.57 2.57 2.57 2.57 2.57 2.51 2.65 3.22 2.51 2.51 2.51	1.66 2.03 2.04 2.04 2.04 7DPC 2.57 2.57 2.57 2.57 2.57 2.57 2.57 2.57	1.04 1.66 2.03 2.04 2.04 2.04 2.57 2.57 2.57 2.57 2.57 2.57 2.57 2.57	0.27 1.04 1.66 2.03 2.04 2.04 7DPC 2.57 2.57 2.57 2.57 2.41 1.49 1.97 0.22 2.23 2.25 2.65 2.51 2.51	7DPC 0.27 1.04 1.66 2.03 2.04 2.05 2.216 2.223 2.251 2.251 2.51 2.51 2.51 2.51 2.51
000	1.44	3.23	2.28	2.26	1.34		2.27	0.93 2.27	4.18 0.93 2.27	3.24 4.18 0.93 2.27	2.64 3.24 4.18 0.93 2.27	2.51 2.64 3.24 4.18 0.93 2.27	1.67 2.51 2.64 3.24 4.18 0.93 2.27	2.32 1.67 2.51 2.64 3.24 4.18 4.18 0.93 2.27	1.36 2.32 1.67 2.51 2.64 3.24 4.18 4.18 0.93 2.27	2.87 1.36 2.32 1.67 2.51 2.64 4.18 4.18 0.93 2.27	2.42 2.87 1.36 2.32 1.67 2.51 2.51 2.64 3.24 4.18 4.18 0.93 2.27	2.92 2.42 2.87 1.36 2.32 1.67 2.51 2.51 2.64 3.24 4.18 0.93 2.27	3.01 2.92 2.42 2.87 1.36 2.32 1.67 2.51 2.51 2.64 4.18 4.18	8DPC 3.01 2.92 2.42 2.87 1.36 2.32 1.67 2.51 2.51 2.51 2.64 4.18 4.18	8DPC 3.01 2.92 2.42 2.87 2.87 1.36 2.32 1.67 2.51 2.51 2.64 3.24 4.18 4.18	1.74 8DPC 2.92 2.42 2.87 1.36 1.36 1.36 1.67 2.51 2.51 2.64 3.24 4.18 0.93 0.93	1.52 1.74 1.74 2.92 2.42 2.92 2.87 2.87 1.36 2.32 1.67 2.51 2.51 2.51 2.51 2.64 4.18 0.93 2.27	1.52 1.52 1.74 1.74 2.92 2.42 2.87 1.36 2.32 1.67 2.51 2.51 2.51 2.54 3.24 4.18 0.93 2.27	1.17 1.52 1.52 1.52 1.52 2.92 2.92 2.92 2.87 1.36 2.32 1.67 2.51 2.51 2.51 2.64 3.24 4.18 0.93 2.27	Na 1.17 1.52 1.52 1.52 1.52 1.52 1.52 1.52 1.52	8DPC Na 1.17 1.52 1.52 1.52 1.52 1.74 1.74 2.92 2.42 2.87 1.67 2.87 1.67 2.51 2.51 2.64 4.18 0.93 2.27
	1.14	3.34	2.35	3.98	2.59	3.24		2.71	4.57	3.17 4.57 2.71	2.83 3.17 4.57 2.71	2.59 2.83 3.17 4.57 2.71	1.91 2.59 2.83 3.17 4.57 2.71	2.24 1.91 2.59 2.83 3.17 4.57 2.71	1.09 2.24 1.91 2.59 2.83 2.83 3.17 4.57 2.71	2.66 1.09 2.24 1.91 2.59 2.83 2.83 2.83 2.83 2.83 2.71	2.52 2.66 1.09 2.24 1.91 2.59 2.83 3.17 4.57 4.57	3.28 2.52 2.66 1.09 2.24 1.91 2.24 2.83 3.17 2.83 2.83 2.83	2.64 3.28 2.52 2.66 1.09 2.24 1.91 2.59 2.83 2.83 2.83 2.71	9DPC 2.64 3.28 3.28 2.52 2.66 1.09 2.24 1.91 2.24 1.91 2.83 2.83 2.83 2.83	9DPC 2.64 3.28 2.52 2.52 2.56 2.66 2.66 2.66 2.59 2.24 2.24 2.283 2.83 2.83 2.83	2.08 9DPC 2.64 2.66 2.66 2.66 2.66 2.66 2.66 2.25 2.24 1.91 2.24 2.83 2.83 2.83 2.83	2.09 2.08 9DPC 2.52 2.52 2.52 2.52 2.52 2.52 2.52 2.5	2.11 2.09 2.08 2.08 2.08 3.28 3.28 2.52 2.52 2.52 2.52 2.52 2.52 2.53 2.83 2.83 2.83 2.83	1.27 2.11 2.09 2.08 2.08 2.08 3.28 3.28 3.28 2.52 2.52 2.52 2.52 2.52 2.52 2.53 2.83 2.83 2.83 2.83	Na 1.27 2.09 2.08 2.64 2.64 2.64 2.52 2.52 2.52 2.52 2.24 1.91 2.83 3.17 3.17 2.71	9DPC Na Na 1.27 2.11 2.09 2.08 2.08 2.08 2.08 2.08 2.08 2.08 2.08
74 0	1.22	4.33	3.26	4.78	3.28	3.30		2.59	4.83	2.72 4.83 2.59	2.76 2.72 4.83 2.59	2.38 2.76 2.72 4.83 2.59	2.33 2.38 2.76 2.72 4.83 2.59	2.77 2.33 2.76 2.72 4.83 2.59	1.98 2.77 2.33 2.38 2.76 2.72 4.83 2.59	3.12 1.98 2.77 2.33 2.38 2.76 2.72 2.72 2.72 2.59	2.10 3.12 1.98 2.77 2.33 2.38 2.76 2.72 2.72 2.72 2.59	1.67 2.10 3.12 1.98 2.77 2.33 2.38 2.76 2.72 2.72 2.59	3.14 1.67 2.10 3.12 2.77 2.33 2.78 2.76 2.72 2.72 2.59	10DPC 3.14 1.67 2.10 3.12 1.98 2.77 2.33 2.33 2.38 2.76 2.72 2.72 4.83 2.59	10DPC 3.14 1.67 2.10 3.12 1.98 2.77 2.33 2.33 2.33 2.33 2.76 2.72 2.72 2.72	2.60 10DPC 1.67 2.10 2.77 2.33 2.38 2.76 2.77 2.72 2.72 2.59	3.35 2.60 10DPC 3.14 1.67 2.10 2.70 2.77 2.33 2.78 2.76 2.72 2.59	2.70 3.35 2.60 2.60 2.60 3.12 3.14 1.67 2.10 3.12 2.71 2.73 2.75 2.72 2.72 2.75	2.13 2.70 3.35 2.60 2.60 3.14 1.67 2.10 2.10 2.10 2.77 2.33 2.77 2.72 2.72 2.72 2.59	Na 2.13 2.70 2.70 2.70 2.70 2.70 2.10 2.77 2.33 2.38 2.77 2.38 2.77 2.72 2.72 2.59	10DPC Na 2.13 2.70 3.35 2.60 2.60 10DPC 3.14 1.67 2.70 2.10 3.12 1.98 2.72 2.72 2.72

				20 1	18 1		16 1	15 1	14 1	13 1	10 1	1 8			5 1		3 1		1 1	Dog ID 0		_		19 1	11 1	9 1	Dog ID 0]		
	103.3	102.5	102.7	102.2	102.2	101.9	101.7	102.5	102.3	103.0	103.1	102.7	101.7	102.7	103.5	101.6	103.0	102.7	101.9	ODPC		102.2	102.2	102.5	102.6	102.0	0DPC		
102 1	103.1	102.8	102.9	101.9	102.5	102.8	102.5	102.7	102.8	102.5	103.3	102.9	102.5	102.6	103.4	102.4	103.0	103.5	102.0	1DPC		102.1	102.3	102.8	102.9	102.0	1DPC		
102.0	102.6	102.7	102.4	101.9	102.1	102.3	102.8	102.3	102.4	102.8	102.3	102.5	102.5	101.7	103.2	102.3	102.5	103.1	101.9	2DPC		102.1	101.3	102.1	102.6	102.6	2DPC		
102.4	102.2	102.7	101.8	102.0	101.5	102.6	101.9	102.0	102.4	102.2	102.8	102.4	103.3	102.8	103.3	102.1	102.2	103.1	101.9	3DPC		102.7	101.4	102.3	102.6	102.9	3DPC		Body Te
102.2	102.5	103.2	102.8	102.2	102.3	102.7	102.5	102.8	102.7	103.2	103.0	102.6	103.0	102.4	103.5	102.4	102.7	103.5	101.7	4DPC	Vac	102.5	102.0	101.9	103.1	103.2	4DPC	Non-Vacci	emperatu
102.2	102.4	102.4	102.5	101.8	102.6	102.1	102.1	102.2	102.4	102.6	102.5	102.2	103.1	102.4	102.6	102.1	102.7	102.3	102.0	SDPC	Vaccinates	102.8	103.4	103.8	103.4	104.6	SDPC	Non-Vaccinated Controls	Body Temperature Post Challenge °F
102.0	102.2	102.7	102.5	101.8	102.0	102.0	102.1	102.4	102.6	102.7	102.2	102.2	103.1	102.8	102.8	103.4	103.1	103.1	101.5	6DPC		103.0	102.0	102.3	102.8	103.2	6DPC	ls	allenge °F
102.0	102.2	103.1	102.8	101.9	102.0	101.9	101.9	102.4	102.4	103.0	102.7	102.5	103.1	102.7	103.4	102.7	103.0	102.9	101.9	7DPC		102.4	101.8	102.4	102.2	100.9	7DPC		
101.8	102.1	102.1	102.0	101.6	101.9	102.0	101.5	101.9	102.0	102.4	102.8	101.7	102.9	102.2	102.8	102.1	102.1	102.4	101.3	8DPC		100.9	101.5	101.6	101.3	Na	8DPC		
101.5	101.8	102.4	102.0	101.4	101.8	101.7	101.1	102.2	101.9	102.9	101.9	101.2	102.6	102.4	103.1	102.1	102.5	102.6	101.6	9DPC		101.6	101.5	102.1	101.5	Na	9DPC		
101.6	102.3	102.2	101.9	101.9	102.0	102.1	101.6	101.7	102.1	102.7	101.9	102.2	102.1	102.1	102.7	102.1	101.9	102.6	101.7	10DPC		101.9	101.4	101.9	102.2	Na	10DPC		

DPC – Days Post Challenge

DPC – Days Post Challenge

ositive For (28	24	23	22	20	18	17	16	15	14	13	10	8	7	6	5	4	ω	2	1	Cat ID		27	21	19	11	9	Cat ID		
Positive For CPV >1.5 log ¹⁰ FAID ₃₀ /mL	<1.5	s. 5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	0DPC		≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	0DPC		
log ¹⁰ FAID	<1.5	≤ <u>1</u> .5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.6	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.8	≤1.5	1DPC		≤1.5	≤1.5	≤1.5	≤1.8	≤1.5	1DPC		
50/mL	515	≤1.5	5.15	5.15	5.15	5.15	5.15	5.15	≤1.5	5.15	5.15	5.15	5.15	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	5.15	≤1.5	2DPC		≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	2DPC		Feo
11.0	<1.5	s 5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	3DPC		≤1.5	≤1.8	≤1.5	≤1.5	≤1.5	3DPC		al Virus
11.0	<1.5	s 5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	4DPC	Vac	≤2.8	4.3	2.5	5.5	≤2.5	4DPC	Co	Fecal Virus Isolation Titer Post Challenge
0.75	\$ 5	s 5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	5DPC	Vaccinates	5.2	4.7	4.2	7.2	6.6	5DPC	Controls	1 Titer Po
1	<1.5	s_15	≤1.5	≤1.5	≤1.5	≤1.5	5.15	≤1.5	≤1.5	5.15	≤1.5	≤1.5	5.15	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	6DPC		1.4	6.3	7.5	7.5	7.6	6DPC		st Chall
- <u>-</u>	\$ 5	s 15	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	7DPC		6.6	6.8	7.6	≥8.5	5.2	7DPC		enge
	<1.5	≤1.5	5.15	≤1.5	5.1⋝	5.15	5.15	5.15	≤1.5	5.15	5.15	5.15	5.1≂	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	5.15	≤1.5	8DPC		5.2	≤2.8	4.2	≥8.6	≥9.2	8DPC		
- 1-2	<1.5	≤1.5	≤1.5	≤1.5	≤1.5	5.15	5.15	5.15	≤1.5	5.15	5.15	5.15	5.15	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	9DPC		≤3.0	4.5	4	≥7.6	Na	9DPC		
1	~1.5	<u>د</u> ر 5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5	10DPC		≤1.5	3.6	≤1.5	6.6	Na	10DPC		

DPC – Days Post Challenge

Safety
Canine Adenovirus Type 2 (CAV-2)
Development of corneal opacity is not associated with the use of
this product
Study data are not available

Study Type	Safety
Pertaining to	All
Study Purpose	Demonstrate safety of product under typical use conditions
Product Administration	Either one or two doses of vaccine 2-4 weeks apart by the
	subcutaneous route. A total of 1231 doses were administered.
Study Animals	A total of 621 dogs, 358 under 6 weeks of age and 263 greater
	than 6 weeks of age, privately owned and from commercial
	kennels were enrolled in the study.
Challenge Description	NA
Interval observed after	No challenge. Observed for 30 minutes after vaccination and
challenge	then daily for 2 weeks after each vaccination.
Results	Frequency of events is appended to the end of this summary.
USDA Approval Date	November 15, 2002

Summary of Reactions:

		Puppies u	p to 6 weeks of a	ge		Dogs >	6 Weeks of Age			
Reaction Type	<24hr	>24hrs	Total Reactions by dose	%	<24hr	>24hrs	Total Reactions by dose	%	Sum of Doses	Reaction Rate
None	NA	NA	696	97.21%	NA	NA	506	98.25%	1202	97.64%
Salivation	0	0	0	0.00%	1	0	1	0.19%	1	0.08%
Lethargy	3	6	9	1.26%	0	0	0	0.00%	9	0.73%
Anorexia	3	10	13	1.82%	0	0	0	0.00%	13	1.06%
Injection Site Swelling	0	4	4	0.56%	0	1	1	0.19%	5	0.41%
Injection Site Pain	3	0	3	0.42%	5	0	5	0.97%	8	0.65%
Facial Swelling	0	0	0	0.00%	1	0	1	0.19%	1	0.08%
Vomiting or Diarrhea	3	0	3	0.42%	1	0	1	0.19%	4	0.32%
Mortality*	0	0	0	0.00%	2	0	2	0.39%	2	0.16%
Total Doses		•	716	•		•	515	•	1231	•

*Confirmed by cooperator to be due to causes other than vaccination

Some dogs had more than one adverse event, so total events do not agree with doses administered.