

**SIMPLICEF- cefpodoxime proxetil tablet**  
**Zoetis Inc.**

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**SIMPLICEF®**  
**(cefpodoxime proxetil)**

For Oral Use In Dogs Only

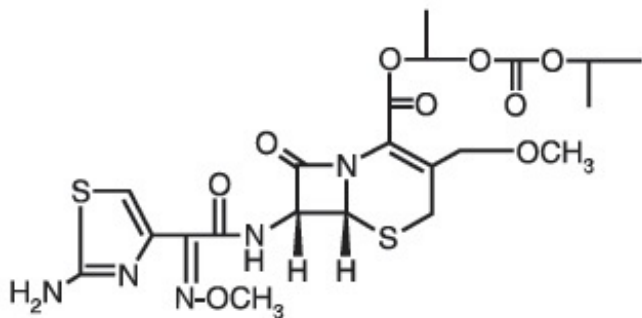
**CAUTION**

Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

**DESCRIPTION**

Cefpodoxime proxetil is an orally administered, extended spectrum, semi-synthetic cephalosporin antibiotic. The chemical name is: (+/-)-1-Hydroxyethyl(+)-(6R,7R)-7-[2-(2-amino-4-thiazolyl)glyoxylamido]-3-methoxymethyl)-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylate, 7 $\beta$ -(Z)-(Omethylloxime), isopropyl carbonate (ester) [87239-81-4].

**Cefpodoxime proxetil Chemical Structure:**



Cefpodoxime proxetil is a prodrug; its active metabolite is cefpodoxime. All doses of SIMPLICEF (cefpodoxime proxetil) tablets are expressed in terms of the active cefpodoxime moiety. SIMPLICEF is available as:

**100 mg Tablet**, each reddish-orange, elliptical, scored tablet contains cefpodoxime proxetil equivalent to 100 mg of cefpodoxime.

**200 mg Tablet**, each light orange, round rectangle, scored tablet contains cefpodoxime proxetil equivalent to 200 mg of cefpodoxime.

**INDICATION**

SIMPLICEF tablets are indicated for the treatment of skin infections (wounds and abscesses) in dogs caused by susceptible strains of *Staphylococcus intermedius*, *Staphylococcus aureus*, *Streptococcus canis* (group G,  $\beta$  hemolytic), *Escherichia coli*, *Pasteurella multocida*, and *Proteus mirabilis*.

**DOSAGE AND ADMINISTRATION**

**Dose range**

The dose range of SIMPLICEF (cefpodoxime proxetil) tablets is 5-10 mg/kg (2.3-4.5 mg/lb) body

weight, administered orally, once a day. The dose may be given with or without food. The determination of dosage for any particular patient must take into consideration such factors as the severity and nature of the infection, the susceptibility of the causative organisms, and the integrity of the patient's host-defense mechanisms. Obtain a sample of the pathogenic organism for culture and sensitivity testing prior to beginning antimicrobial therapy. Once results become available, continue with appropriate therapy.

### Duration

SIMPLICEF tablets should be administered once daily for 5-7 days or for 2-3 days beyond the cessation of clinical signs, up to a maximum of 28 days. Treatment of acute infections should not be continued for more than 3-4 days if no response to therapy is seen.

### Dosing Charts

For daily oral administration of SIMPLICEF at 5 mg/kg (Table 1) and 10 mg/kg (Table 2).

**Table 1. Dose Table for SIMPLICEF Tablets at 5 mg/kg Total Daily Dosage**

Weight of Dog (lbs)						
Daily Dose		22	44	66	88	132
No. of 100 mg tablets		0.5	1	1.5		1
No. of 200 mg tablets					1	1

Weight of Dog (kgs)						
Daily Dose		10	20	30	40	60
No. of 100 mg tablets		0.5	1	1.5		1
No. of 200 mg tablets					1	1

**Table 2. Dose Table for SIMPLICEF Tablets at 10 mg/kg Total Daily Dosage**

Weight of Dog (lbs)						
Daily Dose	11	22	44	66	88	132
No. of 100 mg tablets	0.5	1		1		
No. of 200 mg tablets			1	1	2	3

Weight of Dog (kgs)						
Daily Dose	5	10	20	30	40	60
No. of 100 mg tablets	0.5	1		1		
No. of 200 mg tablets			1	1	2	3

### CONTRAINDICATIONS

Cefpodoxime proxetil is contraindicated in dogs with known allergy to cefpodoxime or to the  $\beta$ -lactam (penicillins and cephalosporins) group of antibiotics.

### WARNINGS

Not for human use. Keep this and all drugs out of reach of children. Antimicrobial drugs, including penicillins and cephalosporins, can cause allergic reactions in sensitized individuals. To minimize the possibility of allergic reactions, those handling such antimicrobials, including cefpodoxime, are

advised to avoid direct contact of the product with the skin and mucous membranes.

## PRECAUTIONS

The safety of cefpodoxime proxetil in dogs used for breeding, pregnant dogs, or lactating bitches has not been demonstrated. As with other cephalosporins, cefpodoxime proxetil may occasionally induce a positive direct Coombs' test.

## ADVERSE REACTIONS

A total of 216 dogs of various breeds and ages ranging from 2 months to 15 years were included in the field study safety analysis. The following table shows the number of dogs displaying each clinical observation.

**Table 3. Abnormal Health Findings in the U.S. Field Study\***

<b>Clinical Observation</b>	<b>SIMPLICEF (n=118)</b>	<b>Active Control (n=98)</b>
Vomiting	2	4
Diarrhea	1	1
Increased water drinking	0	2
Decreased appetite	1	1

\* Dogs may have experienced more than one of the observations during the study.

To report a suspected adverse reaction call 1-888-963-8471.

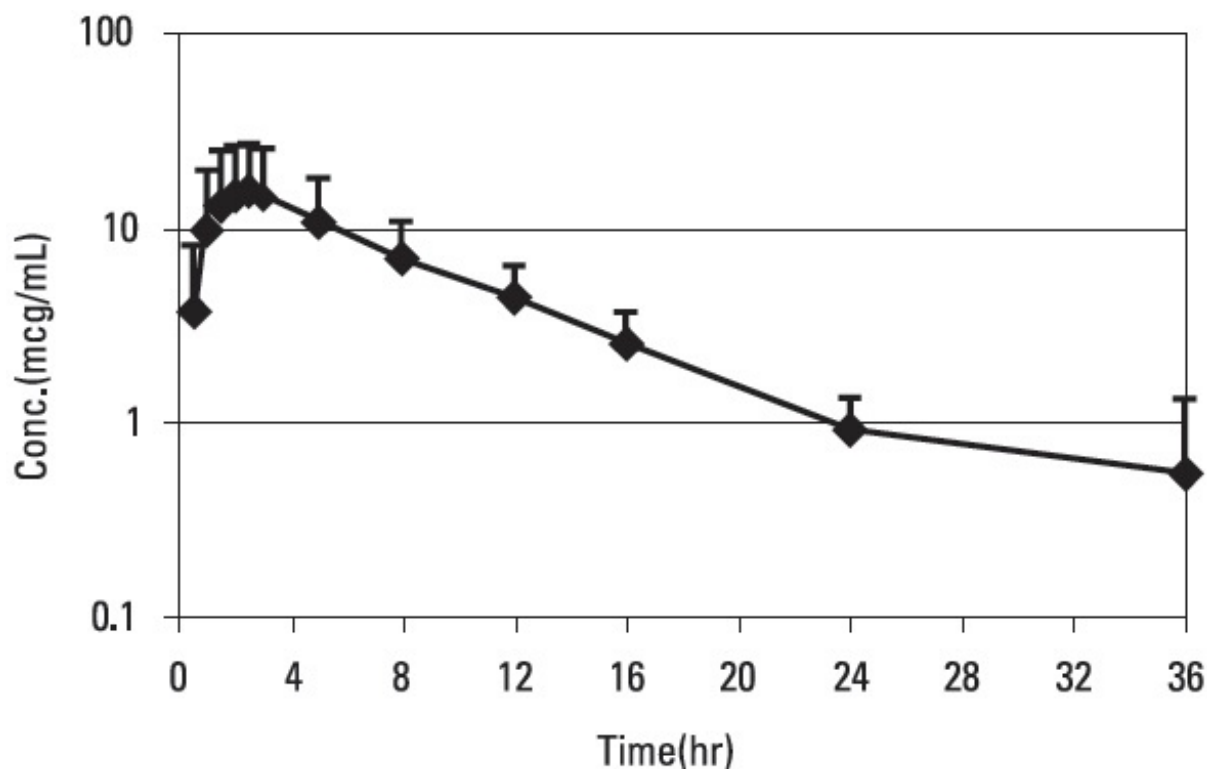
To request a material safety data sheet (MSDS) for SIMPLICEF tablets, call 1-888-963-8471.

## CLINICAL PHARMACOLOGY

### Pharmacokinetics/Pharmacodynamics

Cefpodoxime proxetil is a prodrug that is absorbed from and de-esterified in the gastrointestinal tract to its active metabolite, cefpodoxime. Following oral administration to fasting Beagles, oral bioavailability was  $63.1 \pm 5.3\%$ .

### Figure 1. Canine Plasma Concentration of Cefpodoxime After a Single Oral Dose of 10 mg/kg Cefpodoxime Proxetil Tablets



Cefpodoxime is distributed in the body with an apparent volume of distribution of  $151 \pm 27$  mL/kg. Like other  $\beta$ -lactam antibiotics, cefpodoxime is eliminated from the body primarily in the urine, with an apparent elimination half-life of approximately 5-6 hours after oral administration. This is similar to the 4.7 hour apparent elimination half-life observed after intravenous dosing. Following intravenous administration of 10 mg/kg, the average total body clearance ( $Cl_B$ ) was  $22.7 \pm 4.19$  mL/hr/kg.

**Table 4. Summary of Pharmacokinetic Parameters Obtained after a Single Oral Dose of 10 mg Cefpodoxime/kg BW, Administered as a Tablet**

PK Parameter	Unit	Tablet (SD)
$AUC_{0-\infty}$	mcg·hr/mL	145 (77.6)
$AUC_{0-LOQ}$	mcg·hr/mL	142 (77.5)
Maximum concentration ( $C_{max}$ )	mcg/mL	16.4 (11.8)
Terminal plasma elimination half-life ( $t_{1/2,z}$ )	hr	5.61 (1.15)
Time of maximum concentration ( $t_{max}$ )	hr	2.21 (0.542)
Mean residence time ( $MRT_{0-\infty}$ )	hr	9.21 (1.97)

### Microbiology

Like other  $\beta$ -lactam antibiotics, cefpodoxime exerts its inhibitory effect by interfering with bacterial cell wall synthesis. This interference is primarily due to its covalently binding to the penicillin-binding proteins (PBPs) (i.e. transpeptidase and/or carboxypeptidase), which are essential for synthesis of the bacterial cell wall. Therefore, cefpodoxime is bactericidal. Cefpodoxime is stable in the presence of many common  $\beta$ -lactamase enzymes. As a result, many organisms resistant to other  $\beta$ -lactam antibiotics (penicillins and some cephalosporins) due to the production of  $\beta$ -lactamases may be susceptible to cefpodoxime.

Cefpodoxime has a broad spectrum of clinically useful antibacterial activity that includes staphylococci, streptococci, and Gram-negative species (including *Pasteurella*, *Escherichia*, and *Proteus*). The compound is not active against most obligate anaerobes, *Pseudomonas* spp., or

enterococci. The minimum inhibitory concentrations (MICs) for cefpodoxime against Gram-positive and Gram-negative pathogens isolated from canine skin infections (wounds and abscesses) in a 2002 U.S. field study are presented in Table 5. All MICs were determined in accordance with the National Committee for Clinical Laboratory Standards (NCCLS). Appropriate quality control (QC) ranges for *in vitro* susceptibility testing are presented in Table 6.

**Table 5. Cefpodoxime Minimum Inhibitory Concentration Values (mcg/mL) from a 2002 Field Study Evaluating Skin Infections (wounds and abscesses) of Canines in the United States.**

Organism*	# of Isolates	MIC <sub>50</sub>	MIC <sub>90</sub>	Range
<i>Staphylococcus intermedius</i>	118	0.12	0.50	0.12->32.0
<i>Streptococcus canis</i> (group G, β hemolytic)	33	≤0.03	≤0.03	≤0.03 <sup>†</sup>
<i>Escherichia coli</i>	41	0.25	0.50	0.12->32.0
<i>Pasteurella multocida</i>	32	≤0.03	≤0.03	≤0.03-0.12
<i>Proteus mirabilis</i>	14	≤0.03	0.06	≤0.03-0.06
<i>Staphylococcus aureus</i>	19	2.0	2.0	0.12-2.0

\* Veterinary specific interpretive criteria have not been established for the above listed canine pathogens by the NCCLS at this time.

† No Range, all isolates yielded the same value.

**Table 6. Acceptable Quality Control Ranges for Cefpodoxime**

QC ATCC strain	KB Disk Diffusion Method		Broth Micro-dilution Method
	Drug concentration	Zone diameter	MIC
<i>Escherichia coli</i> 25922	10 mcg	23-28 mm*	0.25-1 mcg/mL*
<i>Staphylococcus aureus</i> 25923	10 mcg	19-25 mm*	
<i>Staphylococcus aureus</i> 29213			1-8 mcg/mL*
<i>Streptococcus pneumoniae</i> 49619	10 mcg	28-34 mm <sup>†</sup>	0.03-0.12 mcg/mL <sup>†</sup>

\* These ranges are for quality control strains used to monitor accuracy of minimum inhibitory concentrations (MICs) of non-fastidious organisms using cation-adjusted Mueller-Hinton agar or broth medium. The dilution range should encompass the QC ranges of these strains in the broth micro-dilution method.

† These ranges are for quality control strains used to monitor accuracy of minimum inhibitory concentrations (MICs) of fastidious organisms. When susceptibility testing is performed for *Streptococcus canis* (group G, β hemolytic), *Streptococcus pneumoniae* ATCC 49619 should be included as a QC strain in the presence of 5% lysed sheep blood (KB disk diffusion method) or 2.5% lysed horse blood (broth micro-dilution method).

## EFFECTIVENESS

The clinical effectiveness of SIMPLICEF (cefpodoxime proxetil) was established in a multi-location (23 site) field study. In this study, 216 dogs with infected wounds or abscesses were treated with either SIMPLICEF (n=118) once daily at 5 mg/kg (2.3 mg/lb) body weight or with a active control antibiotic (n=98) administered twice daily for 5-7 days. In this study, SIMPLICEF was considered noninferior to the active control (88.7% versus 88.4% respectfully) in the treatment of canine skin infections (wounds and abscesses) caused by susceptible strains of *Staphylococcus intermedius*, *Staphylococcus aureus*, *Streptococcus canis* (group G, β hemolytic), *Escherichia coli*, *Pasteurella multocida*, and *Proteus mirabilis*.

## ANIMAL SAFETY

In target animal safety studies, cefpodoxime was well tolerated at exaggerated daily oral doses of 100 mg/kg/day (10 times the maximum label dose) for 13 weeks in adult dogs and for 28 days in puppies (18-23 days of age). Therefore, once daily administration of cefpodoxime oral tablets at the maximum labeled dose of 10 mg/kg for up to 28 days was shown to be safe in adult dogs and puppies.

Blood dyscrasia including neutropenias, may be seen following high doses of cephalosporins. Cephalosporin administration should be discontinued in such cases.

## **STORAGE INFORMATION**

Store tablets at controlled room temperature 20° to 25°C (68° to 77°F). Replace cap securely after each opening.

## **HOW SUPPLIED**

SIMPLICEF tablets are available in the following strengths (cefepodoxime equivalent), colors, and sizes:

**100 mg** (reddish-orange, elliptical, scored, debossed with 5228)

Bottles of 100

Bottles of 250

**200 mg** (light orange, round rectangle, scored, debossed with 5229)

Bottles of 100

Bottles of 250

NADA # 141-232, Approved by FDA

Manufactured by:

Sandoz

Kundl, Austria

Product of India

Distributed by:

Zoetis Inc.

Kalamazoo, MI 49007

Revised June 2013

46104787

## **PRINCIPAL DISPLAY PANEL - 100 mg 100 tabs Tablet Bottle Label**

**SIMPLICEF**<sup>®</sup>

(cefepodoxime proxetil)

**100 mg**

100 TABLETS

Antimicrobial For Oral Use  
in Dogs Only

**Caution:** Federal (USA) law  
restricts this drug to use by  
or on the order of a licensed  
veterinarian.

NADA# 141-232, Approved by FDA

**zoetis**

**SIMPLICEF<sup>®</sup>**  
(cefpodoxime proxetil)

**100 mg**

100 TABLETS  
Antimicrobial For Oral Use  
in Dogs Only

**Caution:** Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

NADA# 141-232, Approved by FDA

**zoetis**

Dosage: 5 - 10 mg/kg (2.3 - 4.5 mg/lb) body weight, administered orally, once daily.  
**See package insert for complete product information.**  
**Warning:** Not for human use. Keep this and all drugs out of reach of children. Store at controlled room temperature 20° to 25°C (68° to 77°F). Dispense in tight, light-resistant container. Replace cap securely after each opening.

**Each tablet contains:** cefpodoxime proxetil equivalent to 100 mg cefpodoxime.

Manufactured by: Sandoz Kundl, Austria  
Product of India

Distributed by: Zoetis Inc. Kalamazoo, MI 49007

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46104785

FPO: UPC  
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LOT

**PRINCIPAL DISPLAY PANEL - 100 mg 250 tabs Tablet Bottle Label**

**SIMPLICEF<sup>®</sup>**  
(cefpodoxime proxetil)

**100 mg**

250 TABLETS

Antimicrobial For Oral Use  
in Dogs Only

**Caution:** Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

NADA# 141-232, Approved by FDA

**zoetis**

**SIMPLICEF<sup>®</sup>**  
(cefpodoxime proxetil tablets)

**100 mg**

250 TABLETS  
Antimicrobial For Oral Use  
in Dogs Only

**Caution:** Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

NADA# 141-232, Approved by FDA

**zoetis**

Dosage: 5 - 10 mg/kg (2.3 - 4.5 mg/lb) body weight, administered orally, once daily.  
**See package insert for complete product information.**  
**Warning:** Not for human use. Keep this and all drugs out of reach of children. Store at controlled room temperature 20° to 25°C (68° to 77°F). Dispense in tight, light-resistant container. Replace cap securely after each opening.

**Each tablet contains:** cefpodoxime proxetil equivalent to 100 mg cefpodoxime.

Manufactured by: Sandoz Kundl, Austria  
Product of Austria

Distributed by: Zoetis Inc. Kalamazoo, MI 49007

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EXP  
LOT

**PRINCIPAL DISPLAY PANEL - 200 mg 100 tabs Tablet Bottle Label**

**SIMPLICEF®**  
(cefepodoxime proxetil)

**200 mg**

100 TABLETS

Antimicrobial For Oral Use  
in Dogs Only

**Caution:** Federal (USA) law  
restricts this drug to use by  
or on the order of a licensed  
veterinarian.

NADA# 141-232, Approved by FDA

*zoetis*

**SIMPLICEF®**  
(cefepodoxime proxetil tablets)

**200 mg**

100 TABLETS  
Antimicrobial For Oral Use  
in Dogs Only

**Caution:** Federal (USA) law  
restricts this drug to use by  
or on the order of a licensed  
veterinarian.

NADA# 141-232, Approved by FDA

*zoetis*

Dosage: 5 - 10 mg/kg  
(2.3 - 4.5 mg/lb) body weight,  
administered orally, once daily.

**See package insert for  
complete product information.**

**Warning:** Not for human use.  
Keep this and all drugs out of  
reach of children. Store at  
controlled room temperature  
20° to 25°C (68° to 77°F).  
Dispense in tight, light-  
resistant container. Replace  
cap securely after each  
opening.

**Each tablet contains:**  
cefepodoxime proxetil  
equivalent to 200 mg  
cefepodoxime.

Manufactured by:  
Sandoz  
Kundl, Austria  
Product of Austria  
Distributed by:  
Zoetis Inc.  
Kalamazoo, MI 49007  
46209210

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EXP  
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**PRINCIPAL DISPLAY PANEL - 200 mg 250 tabs Tablet Bottle Label**

**SIMPLICEF®**  
(cefepodoxime proxetil)

**200 mg**

250 TABLETS

Antimicrobial For Oral Use  
in Dogs Only

**Caution:** Federal (USA) law  
restricts this drug to use by  
or on the order of a licensed  
veterinarian.

NADA# 141-232, Approved by FDA



**SIMPLICEF<sup>®</sup>**  
(cefpodoxime proxetil tablets)

**200 mg**

250 TABLETS  
Antimicrobial For Oral Use  
in Dogs Only

**Caution:** Federal (USA) law  
restricts this drug to use by  
or on the order of a licensed  
veterinarian.

NADA# 141-232, Approved by FDA

**zoetis**

Dosage: 5 - 10 mg/kg  
(2.3 - 4.5 mg/lb) body weight,  
administered orally, once daily.

**See package insert for  
complete product information.**

**Warning:** Not for human use.  
Keep this and all drugs out of  
reach of children. Store at  
controlled room temperature  
20° to 25°C (68° to 77°F).  
Dispense in tight, light-  
resistant container. Replace  
cap securely after each  
opening.

**Each tablet contains:**  
cefpodoxime proxetil  
equivalent to 200 mg  
cefpodoxime.

Manufactured by:  
Sandoz  
Kundi, Austria  
Product of Austria

Distributed by:  
Zoetis Inc.  
Kalamazoo, MI 49007

87219 08964 4

46209216

EXP  
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**SIMPLICEF**

cefpodoxime proxetil tablet

**Product Information**

<b>Product Type</b>	PRESCRIPTION ANIMAL DRUG	<b>Item Code (Source)</b>	NDC:54771-5228
<b>Route of Administration</b>	ORAL		

**Active Ingredient/Active Moiety**

Ingredient Name	Basis of Strength	Strength
CEFPODOXIME PROXETIL (UNII: 2TB00A1Z7N) (CEFPODOXIME - UNII:7R4F94TVGY)	CEFPODOXIME	100 mg

**Product Characteristics**

<b>Color</b>	ORANGE (reddish-orange)	<b>Score</b>	2 pieces
<b>Shape</b>	OVAL (elliptical)	<b>Size</b>	11mm
<b>Flavor</b>		<b>Imprint Code</b>	5228
<b>Contains</b>			

**Packaging**

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:54771-5228-1	100 in 1 BOTTLE		
2	NDC:54771-5228-2	250 in 1 BOTTLE		

## Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
NADA	NADA141232	07/22/2004	

## SIMPLICEF

cefpodoxime proxetil tablet

### Product Information

Product Type	PRESCRIPTION ANIMAL DRUG	Item Code (Source)	NDC:54771-5229
Route of Administration	ORAL		

### Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
CEFPODOXIME PROXETIL (UNII: 2TB00A1Z7N) (CEFPODOXIME - UNII:7R4F94TVGY)	CEFPODOXIME	200 mg

### Product Characteristics

Color	ORANGE (reddish-orange)	Score	2 pieces
Shape	OVAL (elliptical)	Size	15mm
Flavor		Imprint Code	5228
Contains			

### Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:54771-5229-1	100 in 1 BOTTLE		
2	NDC:54771-5229-2	250 in 1 BOTTLE		

## Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
NADA	NADA141232	07/22/2004	

**Labeler** - Zoetis Inc. (828851555)

Revised: 1/2018

Zoetis Inc.