ScheBo® • Pancreas Elastase 1 Quick™
Canine

- Diagnosis/ Exclusion of Canine Exocrine Pancreatic Insufficiency (EPI)
- Results available 10 minutes after adding stool extract to test cassette
Exocrine Pancreatic Insufficiency (EPI) in Dogs

- EPI occurs when the pancreatic acinar cells produce insufficient digestive enzymes (lipase, amylase, proteases)
- EPI results in inadequate digestion (maldigestion)
- Physical signs of EPI may develop gradually over a long period of time or can appear rapidly within just a week or two
- Visible symptoms may not appear until atrophy of 80-95% the pancreas
- If left untreated the dog will die from malnutrition
Breeds at Greatest Risk

- German Shepherds
- Rough Coated Collies
  - Terrier Breeds
  - Cavalier King Charles Spaniels
  - English Setters
  - Chow Chow
- Any breed can develop EPI!

Causes of EPI include:
- Pancreatic Acinar Atrophy
- Pancreatic Hypoplasia
- Chronic Pancreatitis
- Neoplasia
The Exocrine Pancreas

- The acinar cells of the exocrine pancreas produce enzymes (lipase, amylase and proteases) for food digestion
- EPI is the inability of the pancreas to secrete sufficient digestive enzymes
- Insufficient digestive enzyme production results in maldigestion and so nutrients are not absorbed
- When untreated the dog dies from malnutrition or organ failure
Visible clinical signs of EPI are often not present until atrophy of 85-90% the pancreas

Any dog that shows symptoms of…

- Steatorrhea (greasy/oily stools), diarrhoea (loose/watery stools), vomiting
- Cow-pat stool, frequent stools
- Polyphagia (ravenous appetite)
- Rapid weight loss, failure to thrive
- Gas, abdominal discomfort
- Borborygmus (tummy sounds)
- Coprophagia (eating faeces)
- Poor coat condition (dry, dull, brittle)

… should be tested for Exocrine Pancreatic Insufficiency

Early diagnosis leads to early therapy!
A dog treated with the right medication and diet is able to live a normal life!
Dog suffering from EPI

Picture used with permission from www.epi4dogs.com
ScheBo® • Pancreas Elastase 1 Quick™ Canine

- Faecal pancreatic elastase is the non-invasive gold standard for the diagnosis/exclusion of exocrine pancreatic insufficiency in humans.
- A rapid test is now available for the exclusion and diagnosis of exocrine pancreatic insufficiency in dogs.
- Results are available in your own surgery 10 minutes after adding the stool extract.
Sensitivity and Specificity

A study with a total of 43 dogs with clinical EPI, and 288 healthy dogs of 98 different pure breeds showed a sensitivity of more than 95% at a cut-off at 10µg/g with one single stool sample.*

- Sensitivity: 95.3%
- Specificity: 92%

- ScheBo® Pancreas Elastase 1 Quick™ does not cross-react with elastase from other species and therefore the results are not influenced by enzyme supplementation (pancreatic enzyme replacement therapy).


ScheBo® Pancreas Elastase1 Quick™ Canine has > 95% sensitivity and specificity when compared with the ScheBo Elastase 1 Canine ELISA stool test.
Test results not affected by Intestinal Inflammation

- A study of 14 dogs with diarrhoea and no intestinal inflammation, 12 dogs with diarrhoea and intestinal inflammation, and 16 healthy control dogs showed that intestinal inflammation does not alter the pancreas elastase concentration.*

- ScheBo® • Pancreas Elastase 1 Quick™ can be used to diagnose or exclude EPI, even in dogs with inflammatory bowel disease.


ScheBo® • Pancreas Elastase1 Quick™ Canine has > 95% sensitivity and specificity when compared with the ScheBo Elastase 1 Canine ELISA stool test.
Sample Material/ Stability

- Single, pea-sized faecal sample
- Samples are stable for 5 days at room temperature, and for 12 months at -20°C
- Stool extracts are stable for one day at 4-8°C
ScheBo® • Pancreas Elastase 1 Quick™ Canine
How to perform the test (1)

Turn the yellow dosing tip of the extraction system anti-clockwise and remove the yellow dosing tip by pulling it up.
How to perform the test (2)

Insert the yellow dosing tip in three different places in the stool sample to a depth of 1cm (all notches must be filled with stool)
How to perform the test (3)

Please check that all notches of the yellow dosing tip are filled with stool.
How to perform the test (4)

Insert the yellow dosing tip with the stool through the yellow cone into the extraction system and turn the tip clockwise to close it.
How to perform the test (5)

Shake well and tap the tube, if necessary, until all the stool has been removed from the notches in the dosing tip.

Leave to stand for 10 minutes.
How to perform the test (6)

Give the tube a final shake.

**Caution:** no stool should remain attached to the yellow dosing tip. If stool still remains stuck to the dosing tip, the extraction system can be left to stand for up to 1 hour in order to free the stool by repeated shaking.
How to perform the test (7)

Tear open the aluminium packaging and remove the test cassette.
How to perform the test (8)

Remove the stool sample extract from the extraction system with a pipette.
How to perform the test (9)

Using the pipette apply 4 drops of stool extract into the circular well on the test cassette.

Wait exactly **10 minutes** and then read the results. Results which are read later may be false.
Interpretation of Test Results

Normal:

Two pink bands develop, one in the control region (C) and one in the test region (T).

A high concentration of canine pancreatic elastase 1 indicates a normal exocrine pancreatic function.

The test stripe (T) must be clearly recognisable as a line, although it may be weaker than that of the Control (C).
Interpretation of Test Results

Low

One pink band appears in the control region (C).

No band develops in the test region (T).

“A missing band means lack of enzymes”

A low concentration of canine pancreatic elastase1 indicates exocrine pancreatic insufficiency (EPI).
Reference Concentration

**Normal** pancreatic elastase1 concentration
= values > 10µg canine elastase 1/g stool.

**Low** pancreatic elastase1 concentration
= values < 10µg canine elastase 1/g stool.
Storage of the Kit and Stability of Sample Material

**Storage Temperature of the Kit**
Between 4°C - 27°C

**Stool Sample Stability**
5 days at room temperature (12 months at -20°C)

**Stability of Stool Extracts**
24 hours at 4°C - 8°C
1 year at -20°C
At a Glance

- Single small stool sample is sufficient
- Absolutely pancreas-specific
- No additional equipment required
- Results available 10 minutes after adding the stool extract
- No starvation periods needed
- No blood sampling
- Intestinal inflammation does not affect the test result
- Uses monoclonal antibodies - substitution therapy does not influence the test result
- Store kit at 4 - 27°C
Stool test for the fast and reliable diagnosis/exclusion of Exocrine Pancreatic Insufficiency

... now also available as a rapid test

Exocrine Pancreatic Insufficiency in dogs is often underdiagnosed. Once diagnosed it can successfully be treated with pancreatic enzymes.

**ScheBo® • Pancreas Elastase1 Quick™ Canine Test**

- Diagnosis/exclusion of Exocrine Pancreatic Insufficiency caused by e.g. Pancreatic Acinar Atrophy, Chronic Pancreatitis, Diabetes Mellitus, Pancreatic Cancer, etc.
- Uses monoclonal antibodies – substitution therapy does not influence the test result
- Absolutely pancreas-specific
- No blood sampling
- No starvation periods needed
- Intestinal inflammation does not interfere with the result
- High sensitivity and specificity

**Sample Material**

- A single small stool sample
- High sample stability allows storage at room temperature

Is the Pancreas Involved?

Weight Loss?
Maldigestion?
Diarrhea?
Vomiting?
Poor Coat Condition?