

**Protexin<sup>®</sup>**  
VETERINARY

Smarter pet care, powered by biotics.

# Pro-Kolin Advanced for Dogs & Cats

A paste to support gut health, soothe the gut lining, & firm up faeces.



# Protexin Biotics

Our Protexin Biotics have been expertly developed to support a healthy microbiome. The microbiome is essential for the normal functioning of the gastrointestinal tract and for the gut's interaction with the rest of the body. Our Protexin Biotics help support the natural balance in the animal's gut and keep them at their best.

## Probiotics

**Probiotics are live microorganisms shown to support the microbiome.**

Pro-Kolin Advanced contains the probiotic *Enterococcus faecium* (PXN-33).<sup>1,2</sup> The *Enterococcus faecium* in Pro-Kolin Advanced has been shown to survive exposure to a low pH, intended to mimic the acidic stomach environment.<sup>3-6</sup>



## Prebiotics

**Prebiotics selectively feed beneficial bacteria, supporting a diverse and healthy microbiome.**

Prebiotics resist being broken down by the host; instead they reach the distal intestine where they are fermented by beneficial bacteria to produce short-chain fatty acids which have been shown to provide many health benefits in humans.<sup>7-9</sup> Pro-Kolin Advanced contains a selection of prebiotics:

### Preplex®

Preplex prebiotic is a combination of oligofructose (also known as fructo-oligosaccharide, FOS) and acacia (gum arabic). Oligofructose is a short-chain molecule. Generally, short-chain molecules are fermented fairly rapidly, whereas longer-chain structures, like acacia, would be expected to undergo slower fermentation.<sup>7</sup> This combination allows Pro-Kolin Advanced to support the growth of beneficial bacteria throughout the colon.<sup>10-12</sup>

### Pectin

Pectin is a soluble fibre that is fermented in the colon.<sup>13-16</sup> As well as being a prebiotic,<sup>17-19</sup> pectin is known to have a soothing effect on the gut lining.

### Psyllium

Human studies show psyllium is a soluble dietary fibre with prebiotic potential that has the ability to absorb water to form a viscous, gel-like substance.<sup>9,20-23</sup> In humans it has been shown to increase faecal viscosity which promotes normal intestinal transit time.<sup>21,23-26</sup>

# Key ingredients



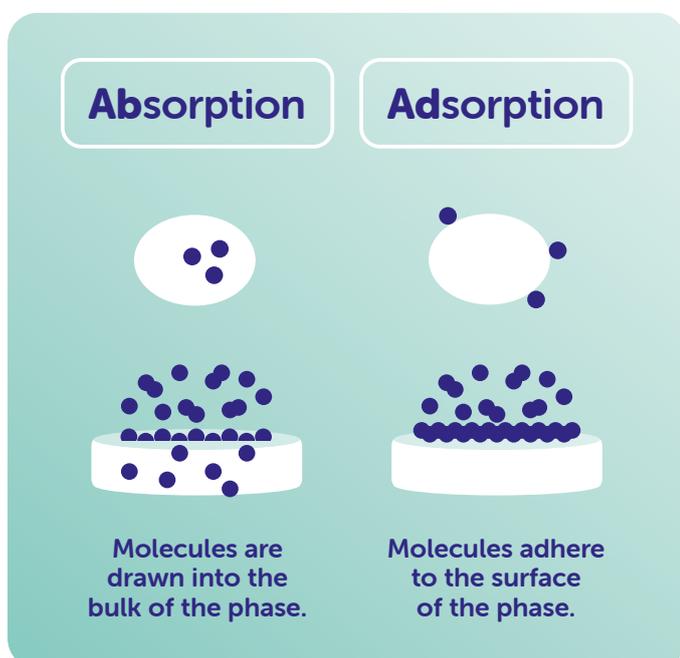
## Binders

Pro-Kolin Advanced contains clays to act as binding agents. Different clays have varied properties which affect their absorptive and adsorptive capabilities:<sup>27-30</sup>

**Absorption** – excess water (for example, within the gastrointestinal tract) moves into the clay.

**Adsorption** – compounds such as toxins may bind to the clay.

Using a combination of kaolin and montmorillonite (bentonite) offers a broader capacity for adsorption and absorption and provides dual benefit to the animal.



## Beta-glucans

Beta-glucans, specifically those with 1,3/1,6 linkage in their chemical structure, have been shown to stimulate the innate immune system in dogs. Some immune cells, such as macrophages, have dectin-1 receptors that recognise and may respond to beta-1,3/1,6-glucans resulting in the observed stimulation of the innate immune system.<sup>31,32</sup>

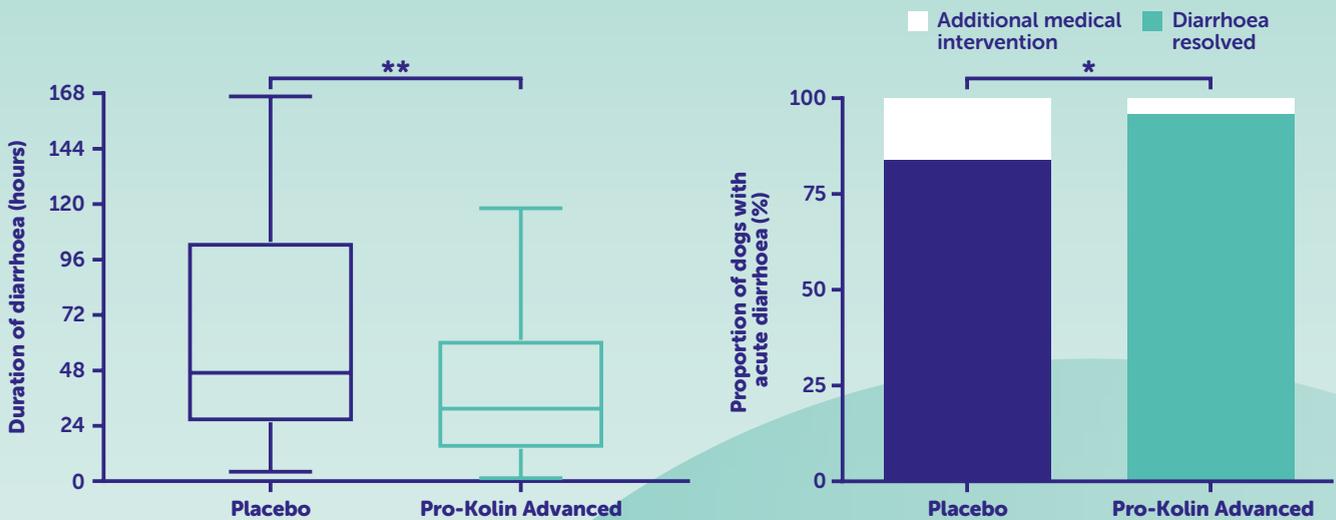
## Taurine (Pro-Kolin Advanced for cat only)

Taurine is present in Pro-Kolin Advanced for cats only. It is an essential amino acid for cats and is necessary to support many normal physiological processes including (but not limited to) vision<sup>33</sup>, digestion<sup>34</sup>, heart muscle function<sup>34,35</sup> and maintaining a healthy immune system.<sup>35,36</sup> Boiling food as part of a bland diet increases taurine losses during cooking.<sup>37</sup> Pro-Kolin Advanced for cats provides a source of taurine to support levels in cats on such diets.



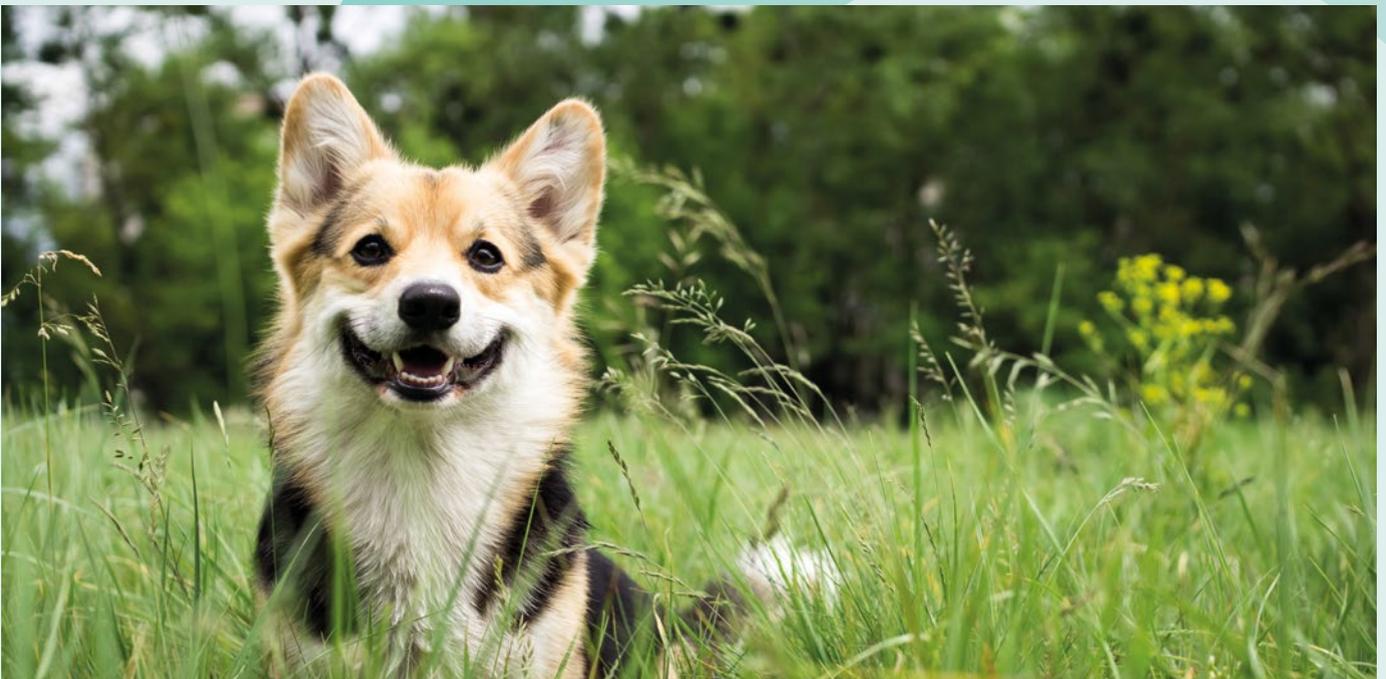
# Clinically proven

Pro-Kolin Advanced is the first product of its kind to be clinically proven. In a placebo-controlled study of 148 dogs, Pro-Kolin Advanced significantly improved the outcome, encouraging normal faecal scores.<sup>38</sup>



Dogs in the Pro-Kolin Advanced group had a significantly shorter duration of diarrhoea than dogs in the placebo group ( $P = .008$ ). Pro-Kolin Advanced probiotic paste; \*\*  $p \leq 0.01$ .

3.5% (2/57) of dogs with acute diarrhoea received additional medical intervention in the Pro-Kolin Advanced group compared to 14.8% (9/61) in the placebo group ( $p = .04$ ; \*).



# Flavouring

Pro-Kolin Advanced contains specially selected flavourings: for dogs, liver flavour, and for cats, chicken flavour. Both flavours are artificial and contain no meat proteins.

## Instructions for use

-  Easy-to-use syringe
-  Trusted formulation
-  Specially selected flavourings – different flavours for dogs and cats!

Paste to be dispensed directly onto the animal's feed for as long as considered necessary or as advised by your veterinary surgeon. Pro-Kolin Advanced can be given up to three times daily if appropriate.

Simultaneous use alongside oral macrolides should be avoided.

Weight	Volume	Frequency
<b>Pro-Kolin Advanced 15ml &amp; 30ml</b>		
<5kg	2ml	Twice daily
5-15kg	3ml	Twice daily
15-30kg	5ml	Twice daily
>30kg	7ml	Twice daily
<b>Pro-Kolin Advanced 60ml</b>		
25-35kg	6ml	Twice daily
35-45kg	8ml	Twice daily
>45kg	10ml	Twice daily





GASTROINTESTINAL

URINARY

CALMING

HEPATIC

For information on our full range of products for dogs, cats, and rabbits, please visit our website.

For references please visit [protexinvet.com/pro-kolin-advanced-refs](https://protexinvet.com/pro-kolin-advanced-refs) or scan

