

To balance the infant immune system

HiPP HA COMBIOTIC®
with extensively hydrolysed
protein



**EFSA-
confirmed
safety &
suitability.¹**

**Science and nature
hand in hand**



Information for healthcare
professionals

Baby: Pippa, 8 months old

¹EFSA Journal 2022; 20(3): 7141.

Extensive
hydrolysate

EFSA confirms the safety and suitability of HiPP hydrolysate¹



Extensively hydrolysed (whey) protein was studied in a multicentre, double-blind, randomised, controlled **clinical safety study**.



HiPP hydrolysate leads to **normal growth** and **normal development** in healthy infants.



EFSA confirms the safety and suitability of HiPP hydrolysate.

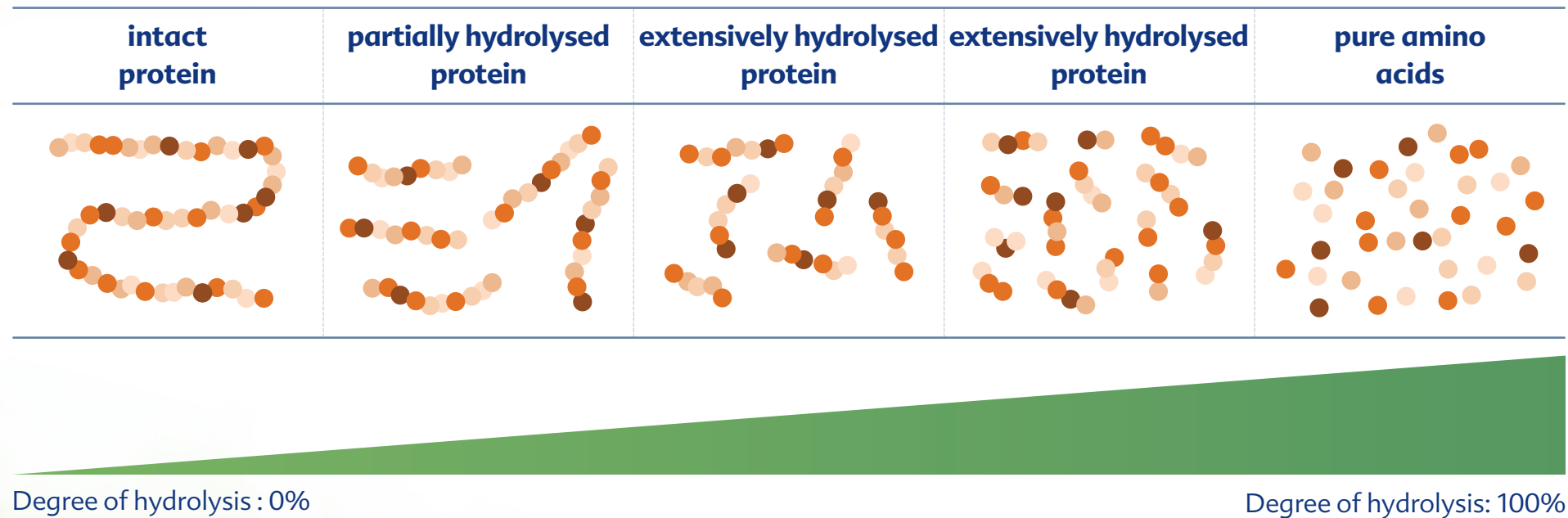


HiPP HA COMBIOTIC®

Extensively hydrolysed protein

An extensively hydrolysed protein should be sufficiently broken down to allow a balance between proinflammatory and tolerogenic immune responses.²

Possible degrees of protein hydrolysis in formulae

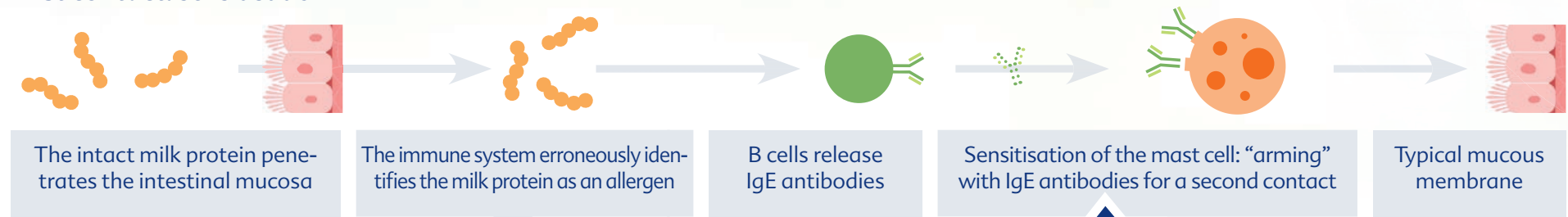


Prevention

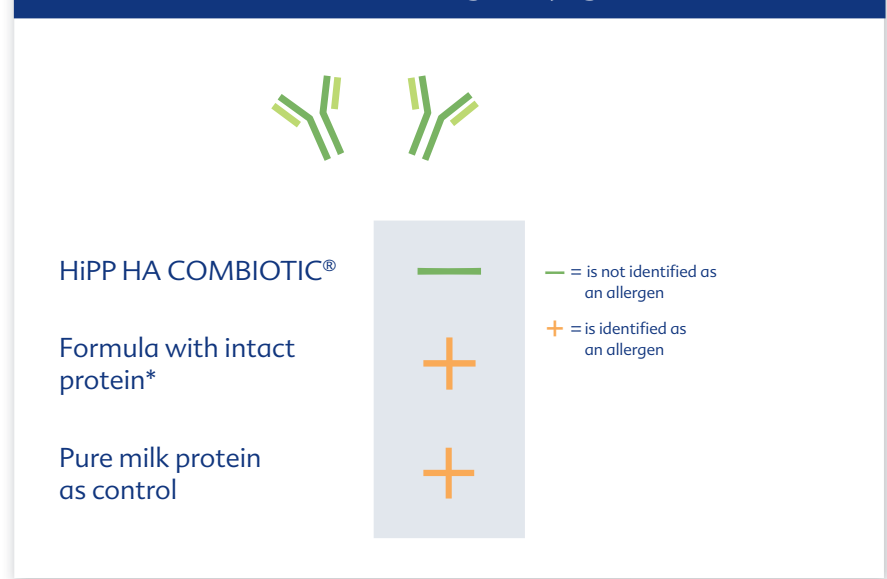
Treatment

Minimised risk of sensitisation

First contact: sensitisation



Identification as an allergen by IgE antibodies²



HiPP HA COMBIOTIC® has no allergenic potential: IgE antibody-loaded mast cells are not activated in vitro.

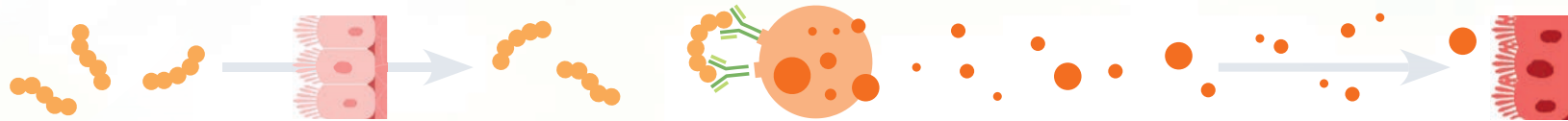
A formula containing extensively hydrolysed protein has the potential to avoid **sensitisation of mast cells.**

HiPP HA COMBIOTIC®

* without probiotics

Significantly reduced release of allergy mediators

Second contact: allergic reaction



The intact milk protein penetrates the intestinal mucosa

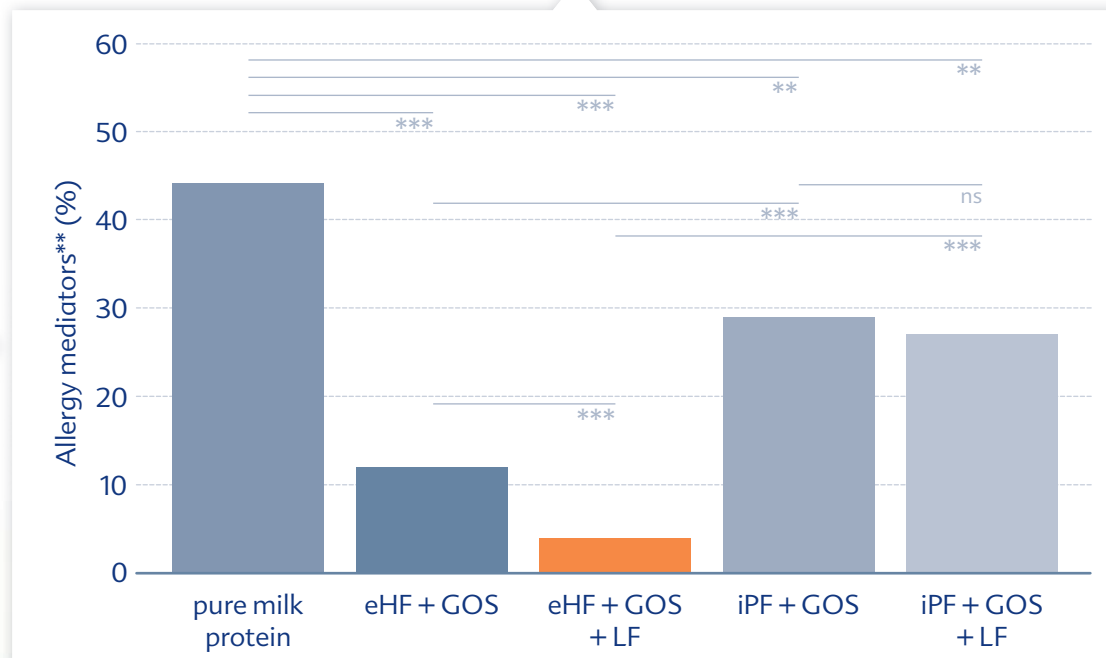
The immune system immediately responds with an allergic reaction: The allergen attaches to the IgE antibodies of the mast cell, and mediators are released

The mucous membrane becomes swollen

HiPP HA COMBIOTIC® induces the lowest release of allergy mediators²

Significance level
 ** p ≤ 0,01
 *** p ≤ 0,001
 ns = not significant

eHF = extensively hydrolysed formula
 iPF = formula with intact protein
 GOS = galacto-oligosaccharides
 LF = L. fermentum



Minimised risk of sensitisation

Extensively hydrolysed formula + GOS + L. fermentum induces the lowest release of allergy mediators.

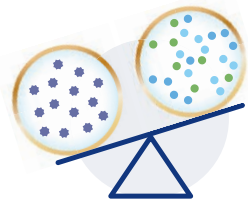
** expression of β-hexosaminidase

The intestine – the source of our health

A balanced intestinal microbiota is the bedrock for a strong immune system, as over 80% of immunocompetent cells are located in the intestine.

An **imbalanced intestinal microbiota (dysbiosis)** can impair an infant's immune system and lead to an **increased allergy risk**.³

A **strong, balanced immune system** is perfectly equipped to ward off allergies and infections.

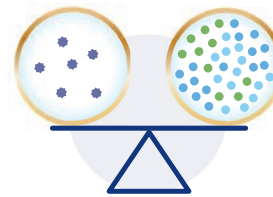


Unbalanced intestinal microbiota (dysbiosis)

=



Weak immune system



Balanced intestinal microbiota

=



Strong immune system

● Lactobacillus ● Bifidobacterium ● Bacteroides ● Pathogenic bacteria

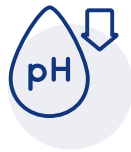
Human milk – the best protection for babies, because it contains pre- and probiotics. These promote the development of a balanced intestinal microbiota and can protect infants from allergies.⁴

HiPP HA COMBIOTIC®

A stronger
intestinal
barrier

The protective shield against allergies

A healthy intestinal microbiota strengthens the intestinal barrier and protects the infant from pathogens and potential allergens.



L. fermentum **lowers the pH value** in the intestine. This makes it more difficult for pathogenic bacteria to colonise it.⁵



L. fermentum attaches to the intestinal wall and **crowds out potentially pathogenic bacteria**.⁶



L. fermentum **promotes the formation of mucus** in the intestinal mucosa, thereby creating a healthy barrier against allergens and pathogens.^{6,7}



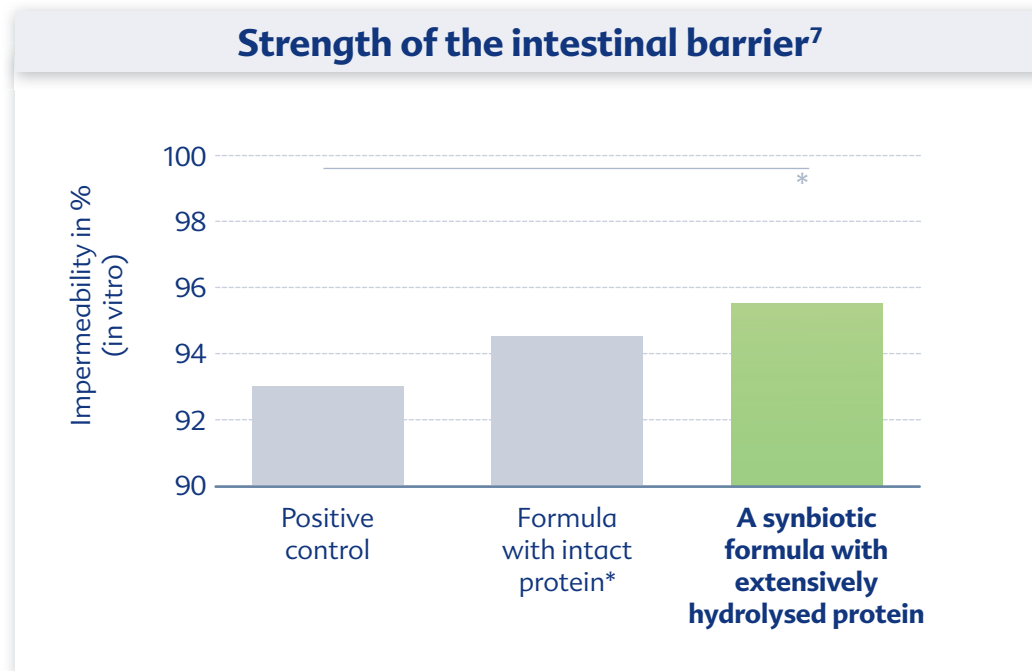
GOS promote the **growth of beneficial intestinal bacteria** (e.g. lactobacilli and bifidobacteria).⁸⁻¹¹



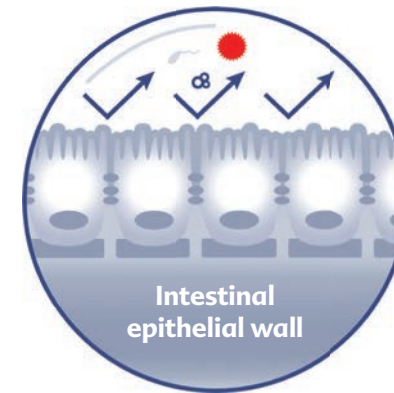
The WAO guideline also suggests using prebiotics and probiotics to prevent allergies in non-breastfed infants at high risk of developing allergies.^{12,13}

Effective protection against allergens

The synbiotic combination of the natural probiotic *L. fermentum* and the tried-and-tested prebiotic GOS effectively strengthens the intestinal barrier. The stronger the barrier, the lower the allergy risk.



Significance level
* $p \leq 0,05$



A strong intestinal barrier protects against penetration of unwanted pathogenic bacteria and allergens.

A synbiotic formula with GOS and *L. fermentum* ensures the formation of a **strong protective barrier against allergens.**

HiPP HA COMBIOTIC®

* without probiotics

A stronger
intestinal
barrier

A balanced immune system

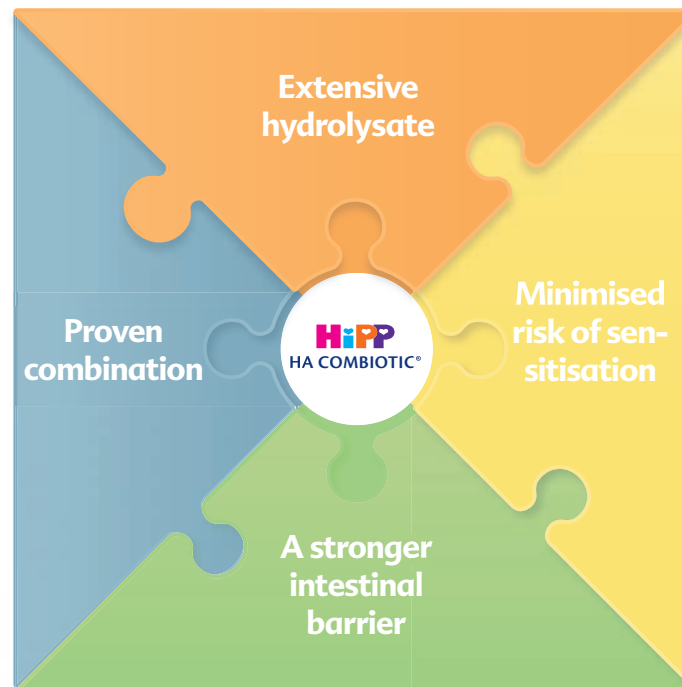
HiPP HA COMBIOTIC®



The **immune-friendly protein hydrolysate** in HiPP HA COMBIOTIC® is extensively hydrolysed and induces a **much lower release of allergy mediators**.²



The **tried-and-tested concept** of pre- and probiotics, which is inspired by nature, **supports the intestinal microbiota and immune system**.^{14,15}



HiPP HA COMBIOTIC® has the potential to prevent mast cell sensitisation.²

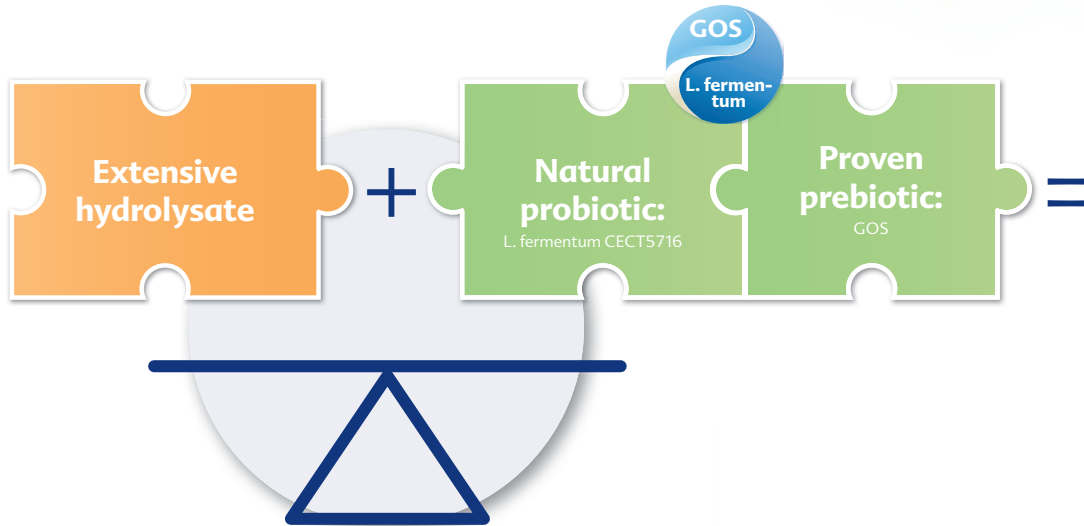


The **intestinal barrier** is effectively reinforced **to prevent the penetration of allergens** and unwanted bacteria.⁷

Ideal combination

For the infant immune system

Proven combination



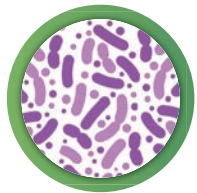
Reduced allergenic activity of the extensive hydrolysate and **strengthening of the intestinal barrier** through pre- and probiotics!

HiPP HA COMBIOTIC®

Science and nature hand in hand

Our recipe has evolved!

- Low protein content, adapted to the physiological needs
- DHA and AA as per current scientific recommendations¹⁶
- EFSA-confirmed safety and suitability¹



INNOVATIVE

since 2002: Use of probiotic lactic acid cultures originally obtained from human milk*



UNIQUE

composition of pro- and prebiotics that is inspired by nature



ROUNDED OFF

with a bioactive folate form that is also found in human milk



HiPP
Research Group
on Human Milk

Our goal:
to fully understand nature's example – human milk

- more than 10 years of intensive research by HiPP's Research Group on Human Milk
- in partnership with specialists from around the world

For more information, including reports from the research group, visit:

hipp.com/hcp

Section: Studies





EFSA-confirmed safety and suitability¹



Stringently controlled



Scientifically tested²



Important information

Breastfeeding is best for babies.

A balanced diet during pregnancy and after birth promotes lactation. Women who do not wish to breastfeed should be informed that it is difficult to reverse that decision. It is important for women to know that the complementary feeding of formula could compromise their breastfeeding success.

Infant formula should only be given upon the advice of independent experts.

Advise parents on how to prepare the formula and note the important information and instructions on the packaging. Incorrect preparation of formula can be harmful to babies' health.

References:

- ¹EFSA Journal 2022; 20(3): 7141.
²Freidl R. et al. Nutrients 2023; 15(1): 111.
³Di Constanzo et al. Int J Mol Sci 2020; 21(15): 5275.
⁴Moossavi S et al. Front Pediatr 2018; 6: 197.
⁵Peran L et al. Int J Colorectal Dis 2006; 21(8): 737–746.
⁶Olivares M et al. J Appl Microbiol 2006; 101(1): 72–79.

- ⁷Calatayud M presented online at New insights in alimentary allergy prevention by improving gut health 18.01.2022.
⁸Ben XM et al. Chinese Medical Journal 2004; 117(6): 927–931.
⁹Fanaro S et al. J Pediatr Gastroenterol Nutr. 2009; 48: 82–88.
¹⁰Sierra C et al. Eur J Nutr 2015; 54(1): 89–99.
¹¹Ben XM et al. World J Gastroenterol 2008; 14(42): 6564–6568.
¹²Cuello-Garcia C et al. World Allergy Organ J 2016; 9: 10.

- ¹³Fiocchi A et al. World Allergy Organ J 2015; 8(1): 4.
¹⁴Maldonado J et al. J Pediatr Gastroenterol Nutr 2012; 54(1): 55–61.
¹⁵Gil-Campos M et al. Pharmacol Res 2012; 65(2): 231–238.
¹⁶Koletzko B et al AJCN 2020; 111: 10–16.