



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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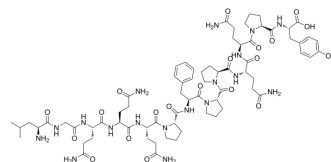
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## Gliadin p31-43

<b>Cat. No.:</b>	HY-P3151
<b>CAS No.:</b>	176326-01-5
<b>Molecular Formula:</b>	C <sub>71</sub> H <sub>102</sub> N <sub>18</sub> O <sub>20</sub>
<b>Molecular Weight:</b>	1527.68
<b>Sequence Shortening:</b>	LGQQQPFPPQQPY
<b>Target:</b>	Others
<b>Pathway:</b>	Others
<b>Storage:</b>	Sealed storage, away from moisture
	Powder    -80°C    2 years
	-20°C    1 year



\* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 50 mg/mL (32.73 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		0.6546 mL	3.2729 mL	6.5459 mL
		<b>5 mM</b>		0.1309 mL	0.6546 mL	1.3092 mL
	<b>10 mM</b>		0.0655 mL	0.3273 mL	0.6546 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (65.46 mM); Clear solution; Need ultrasonic					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Gliadin p31-43 is an undigested gliadin peptide. Gliadin p31-43 induces an innate immune response in the intestine and interferes with endocytic trafficking. Gliadin p31-43 can be used for celiac disease research <sup>[1][2]</sup> .
<b>In Vitro</b>	<p>Gliadin p31-43 (100 µg/mL; 30 minutes-6 hours) treatment induces the MyD88/TLR7 complexes, and activates downstream signalling by activating MAPKs, ERK, JNK and p38). Gliadin p31-43 increases the levels of the phosphorylated forms of pY-ERK, JNK (pY-JNK) and p38 (pY-p38)<sup>[1]</sup>.</p> <p>Gliadin p31-43 treatment increases NF-κB phosphorylation in CaCo-2 cells from 0.45 in control cells to 0.86. Gliadin p31-43 treatment induces a significant increase in levels of the MxA protein. The levels of the IFN-α 7 and 17 mRNAs are also analysed after Gliadin p31-43 treatment<sup>[1]</sup>.</p> <p>In CaCo-2 cells, Gliadin p31-43 localizes to the early endosomes and delays vesicular trafficking. Gliadin p31-43 interferes with the correct localization of the growth factor regulated tyrosine kinase substrate (HRS) to early endosomes, delaying the</p>

maturation of the endocytic vesicles<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis<sup>[1]</sup>

Cell Line:	CaCo-2 cells
Concentration:	100 µg/mL
Incubation Time:	30 minutes, 3 hours, 6 hours
Result:	Showed the increase in formation of the MyD88/TLR7 complex, and increased in the level of TLR7.

#### In Vivo

Gliadin p31-43 (10 µg; intraluminally injection) shows a sequence-specific spontaneous ability to form structured oligomers and aggregates in vitro and induced activation of the apoptosis-associated speck-like (ASC) complex<sup>[2]</sup>.

The increment of IL-1β indicates the activation of the inflammasome caspase-1 pathway in the small intestine mucosa by oral administration of Gliadin p31-43 (20 µg) in wild type C57Bl/6 mice. Gliadin p31-43 has an intrinsic propensity to form oligomers which trigger the NLRP3 inflammasome<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Merlin Nanayakkara, et al. P31-43, an undigested gliadin peptide, mimics and enhances the innate immune response to viruses and interferes with endocytic trafficking; a role in celiac disease. *Sci Rep.* 2018 Jul 17;8(1):10821.

[2]. María Florencia Gómez Castro, et al. p31-43 Gliadin Peptide Forms Oligomers and Induces NLRP3 Inflammasome/Caspase 1- Dependent Mucosal Damage in Small Intestine. *Front Immunol.* 2019 Jan 30;10:31.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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