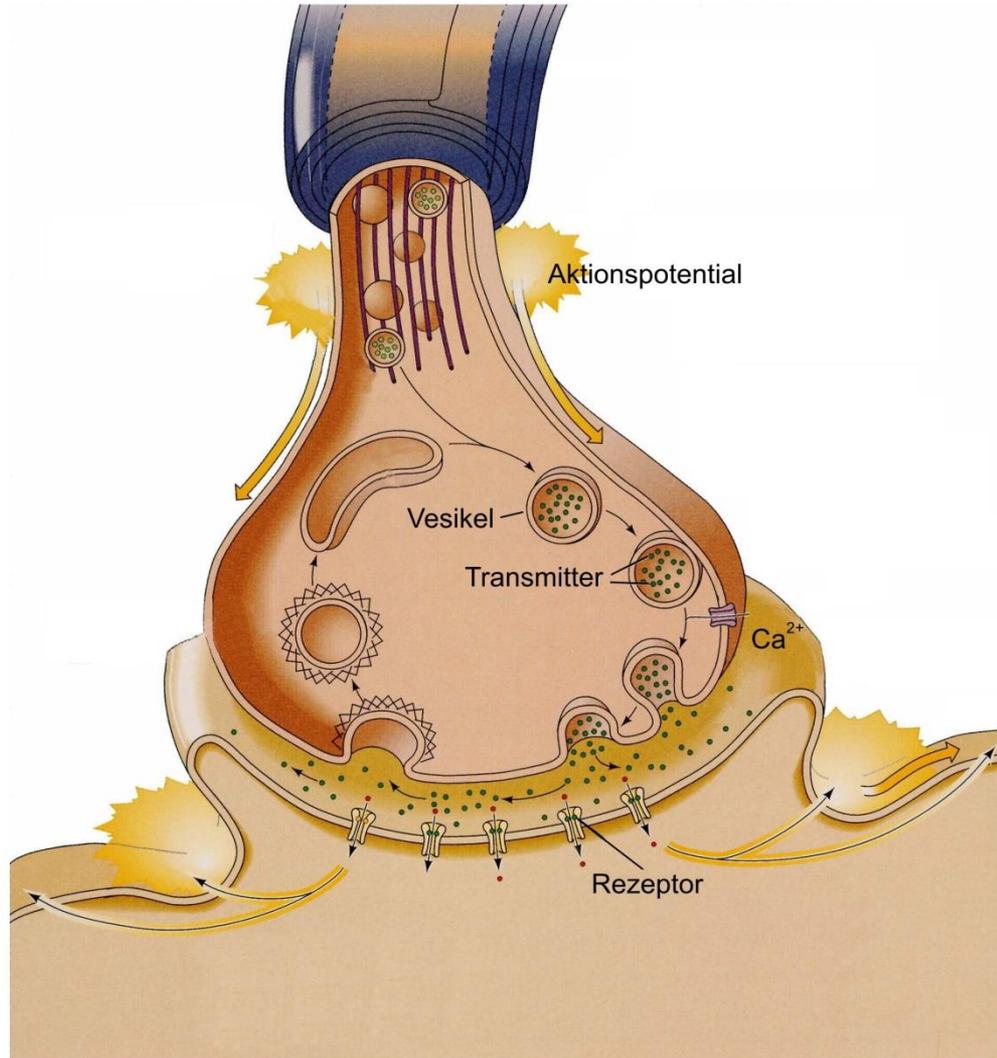
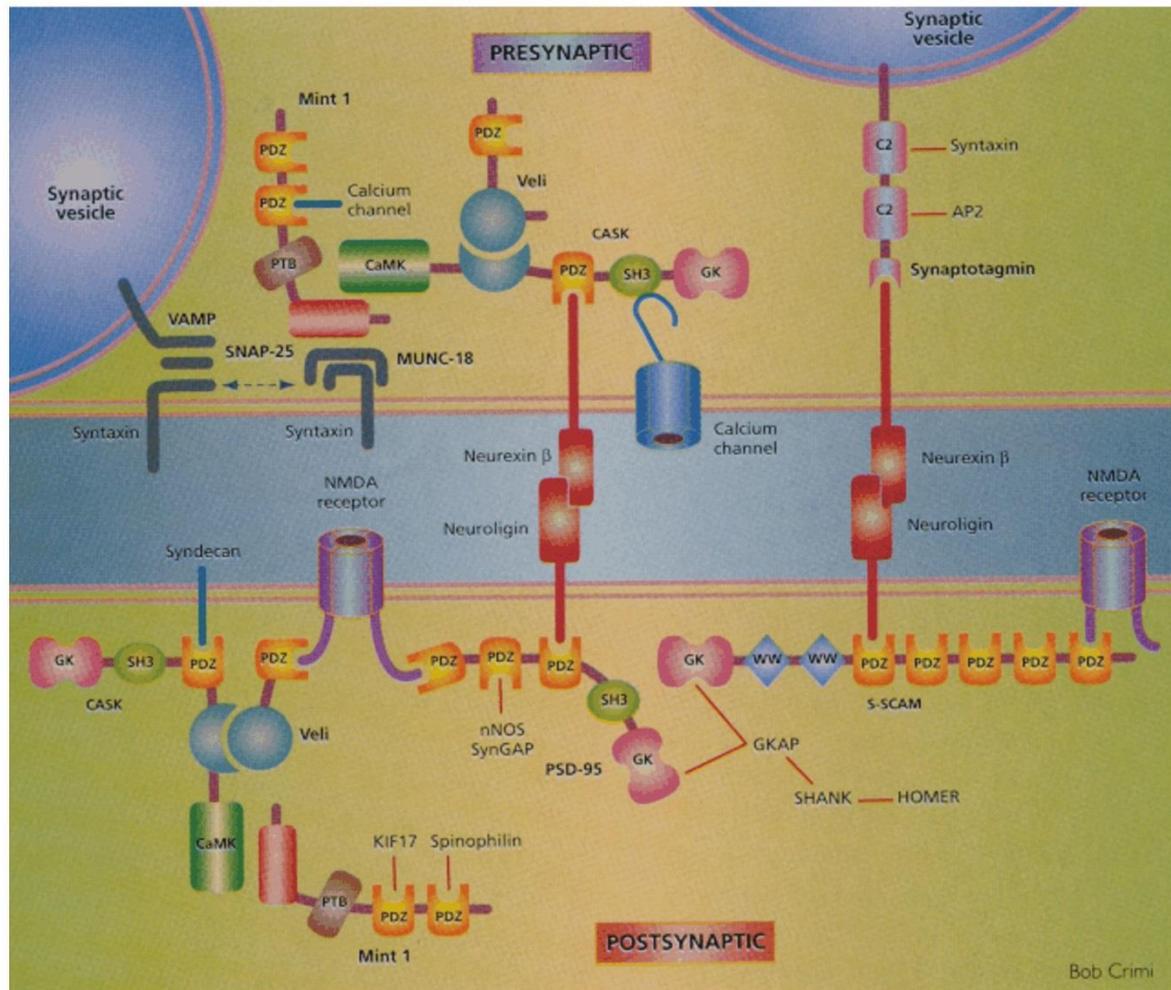


# Signalkomplexe

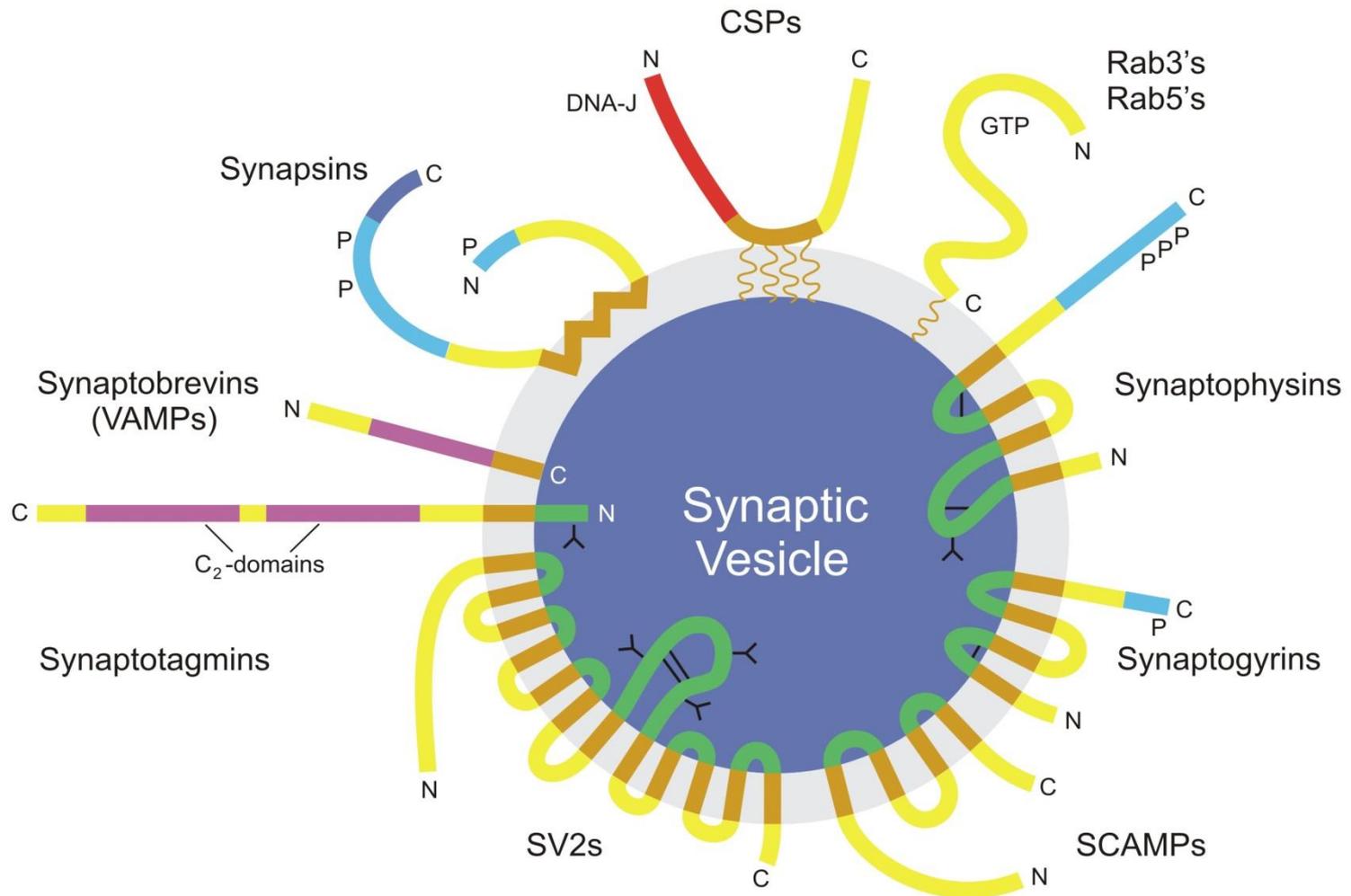
# Synaptische Transmission



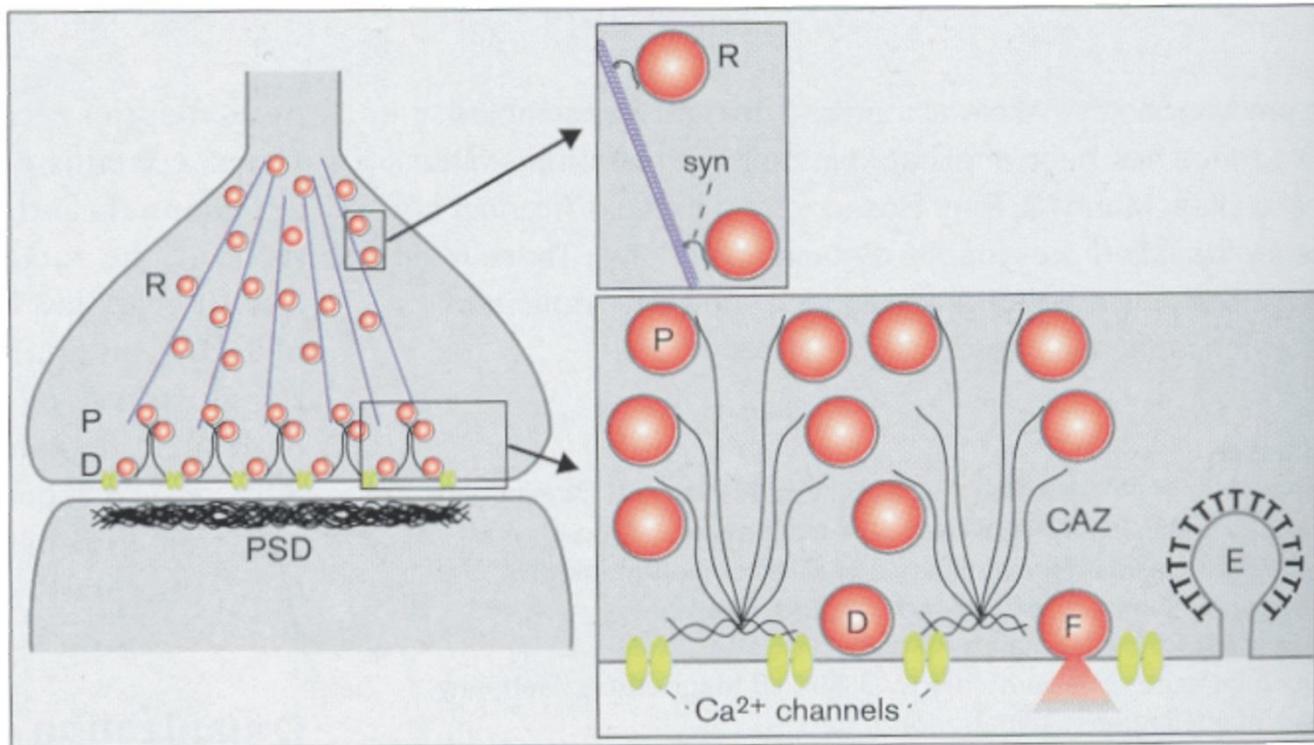
## Proteinkomplexe in der Synapse



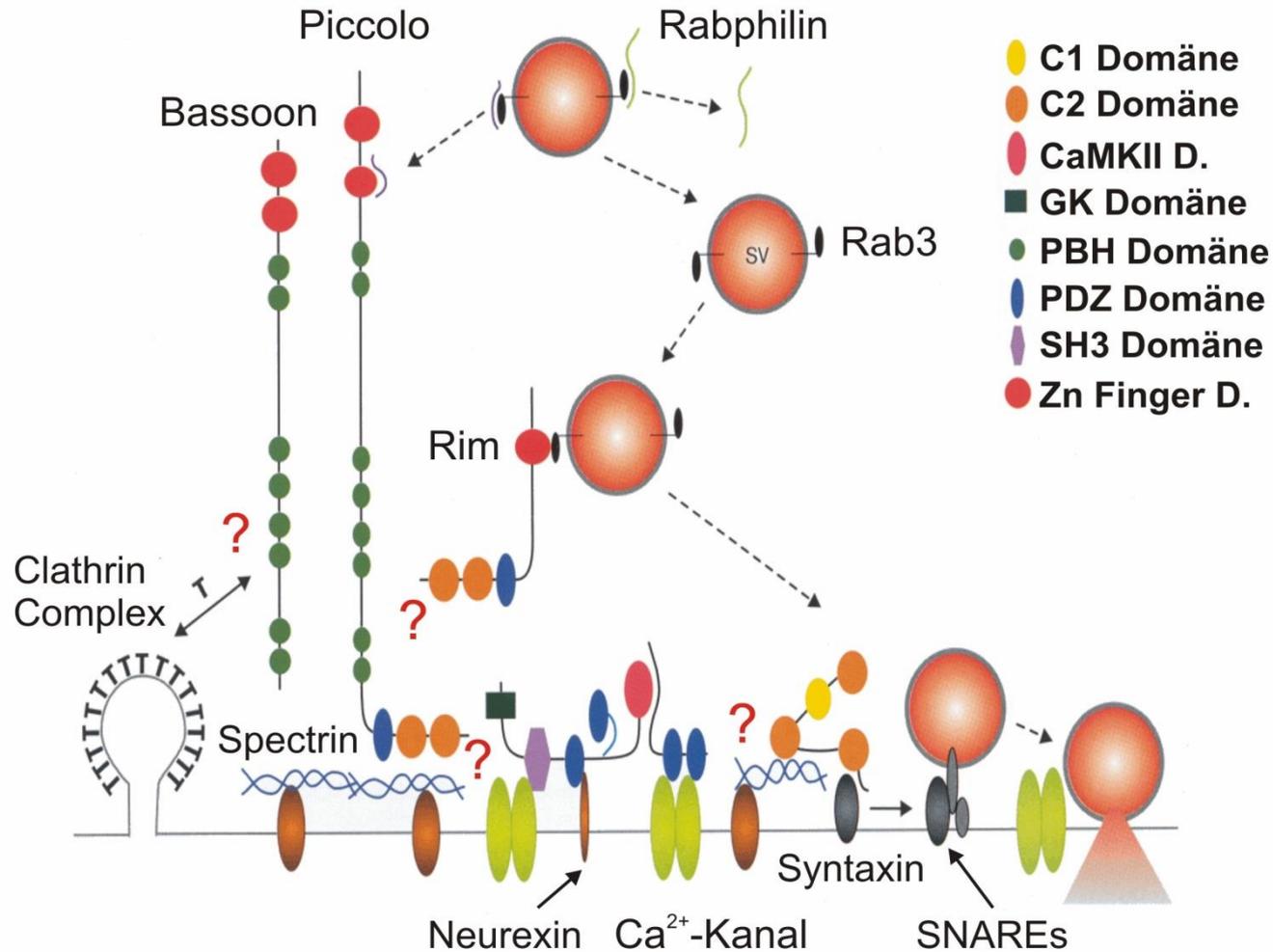
# Synaptische Vesikel



# Vesikeltransport



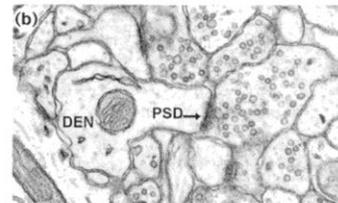
# Präsynaptische Proteinkomplexe



# Postsynaptische Proteinkomplexe

# Postsynaptische Dichte (PSD)

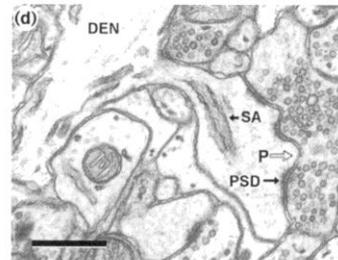
7  $\mu\text{m}$



„stubby“

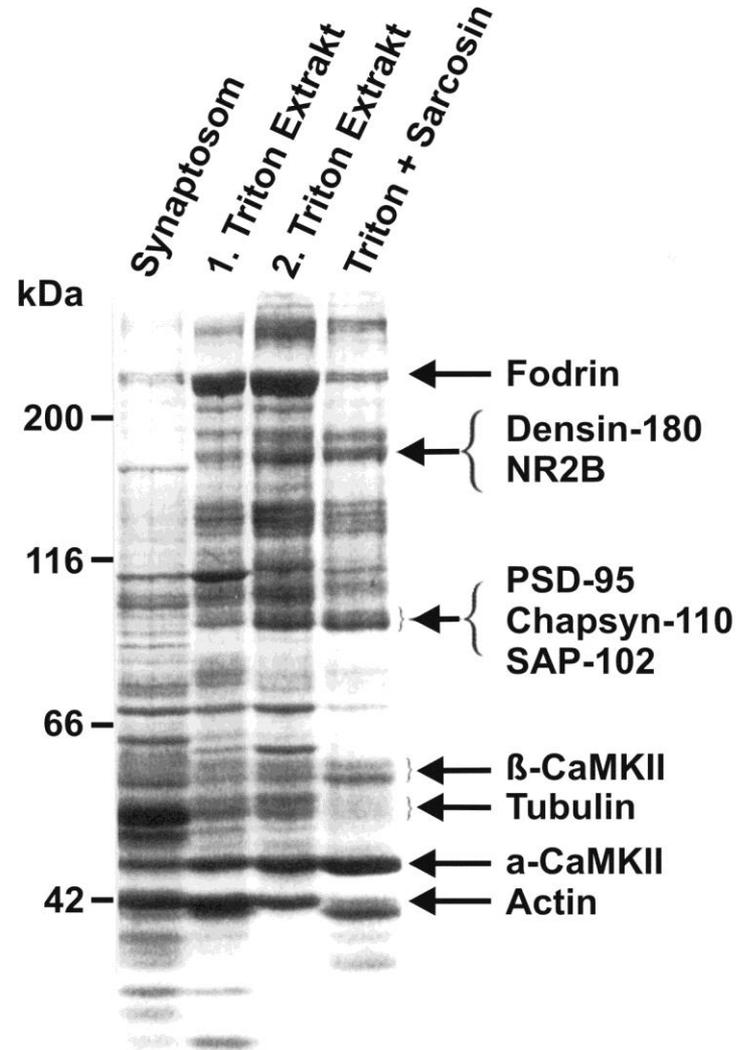


„thin“

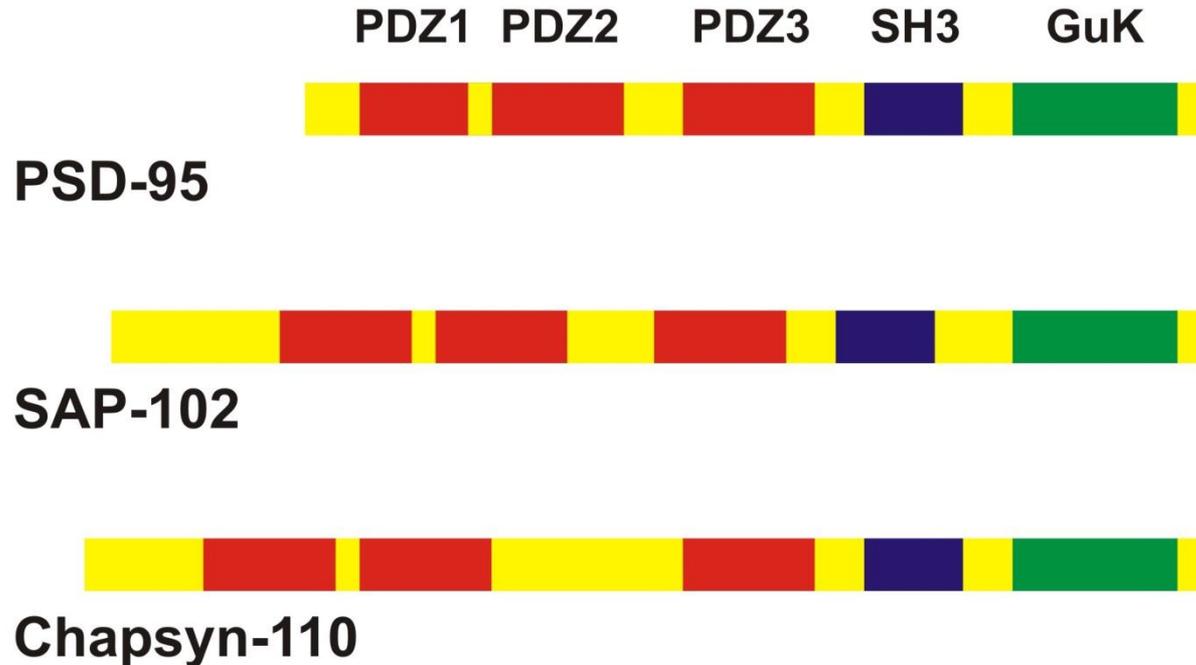


„mushroom“

# Isolierung PSD Proteine



# Aufbau verschiedener PSD Proteine

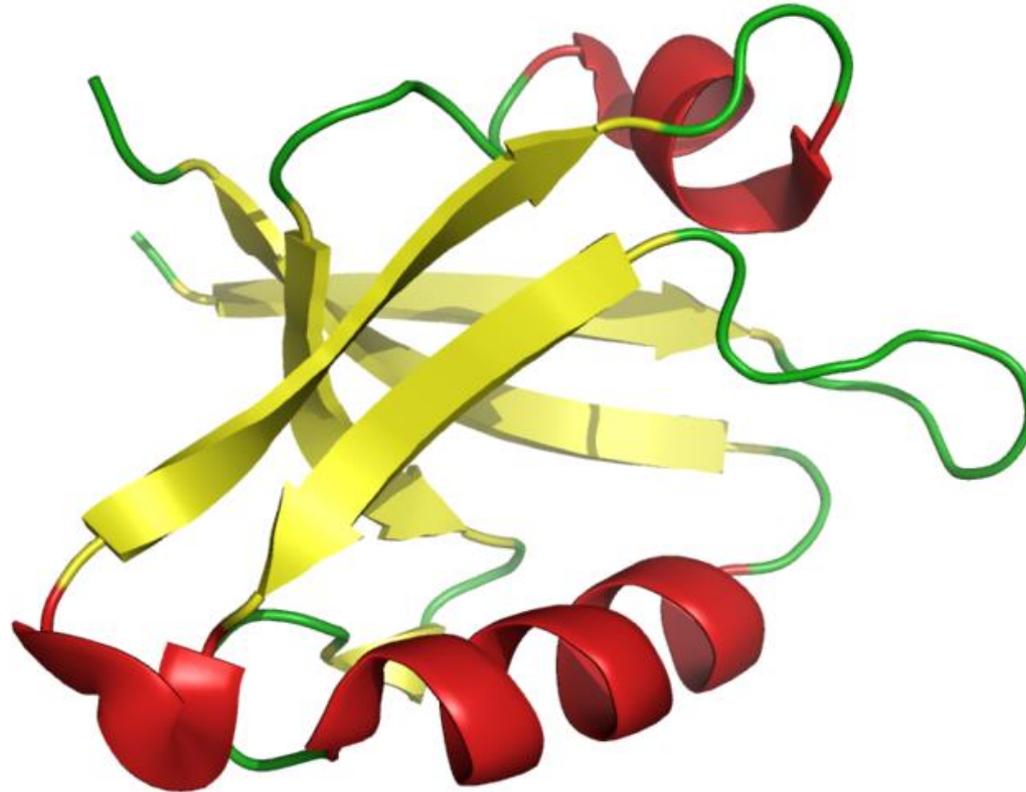


PDZ = PSD-95; Discs-large; Zona occludens-1

SH3 = src Homologie Domäne

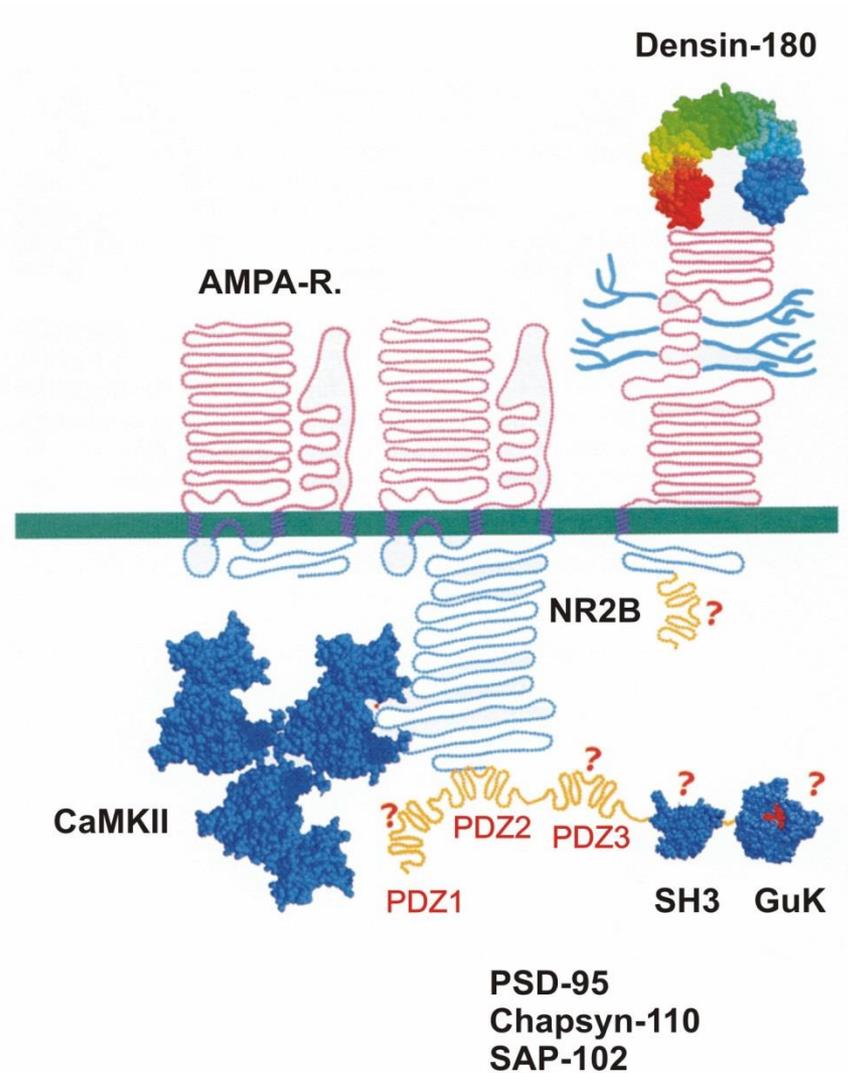
GuK = Guanylat-Kinase

# Struktur einer PDZ Domäne

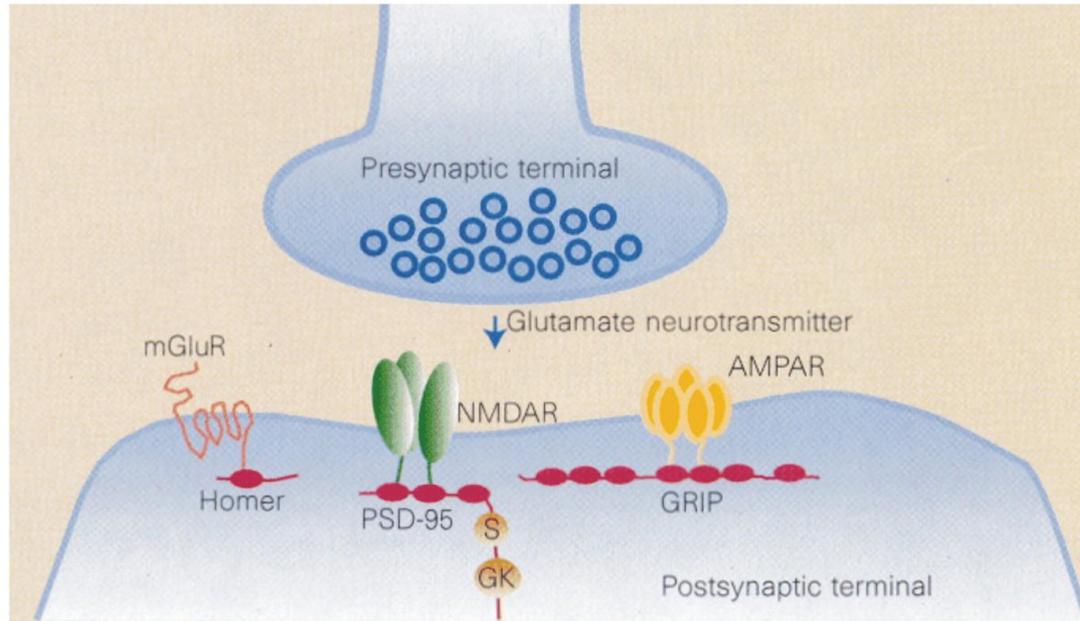


PDZ Domäne 2DC2.png; GOPC

# PSD-Protein Bindungspartner



# Verankerung der Glutamat-Rezeptoren



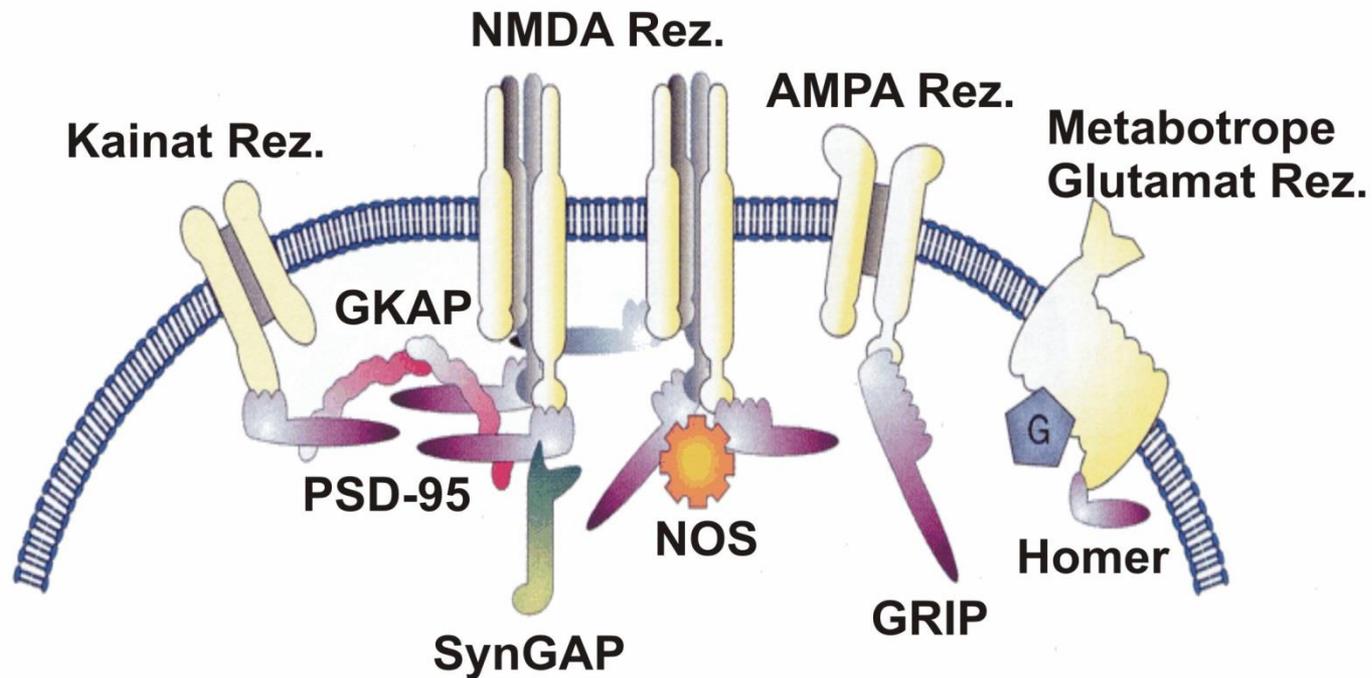
# Wechselwirkung PDZ-Domäne : Zielprotein

Zielprotein		Motiv1	Motiv2
<b>NMDA-Rez.</b>	NR1-3	- S T V V	
	NR1-4	- S T V V	
	NR2A	- E S D V	
	NR2B	- E S D V	
	GluR6	- E T M A	
<b>7-TM Rez.</b>	$\beta$ 1-Rez.	- E T V V	
	$\beta$ 2-Rez.	- D S R L	
	5HT2A		- V S C V
	5HT2C		- I S S V
	SSTR2		- Q T S I

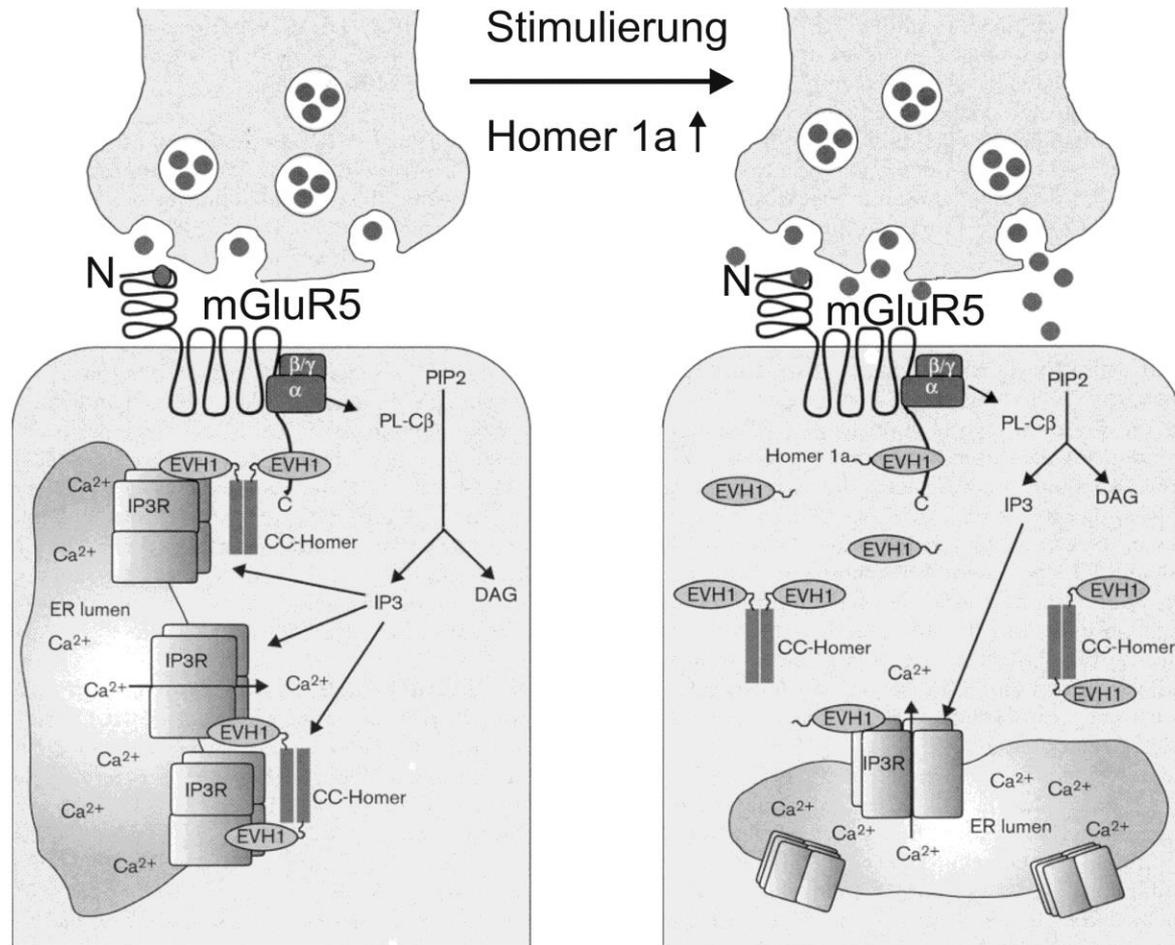
# Wechselwirkung PDZ-Domäne : Zielprotein

Zielprotein		Motiv1	Motiv2
<b>K<sup>+</sup>-Kanal</b>	Kv1.1		- L T D V
	Kv1.3		- F T D V
	Kv1.4	- E T D V	
	Kv4.1		- I S S L
	Kv4.2		- V S A L
<b>Transporter</b>	CFTR	- D T R L	
<b>Konsensus</b>		<b>E T/S X V</b>	<b>(hydr) T/S X V</b>

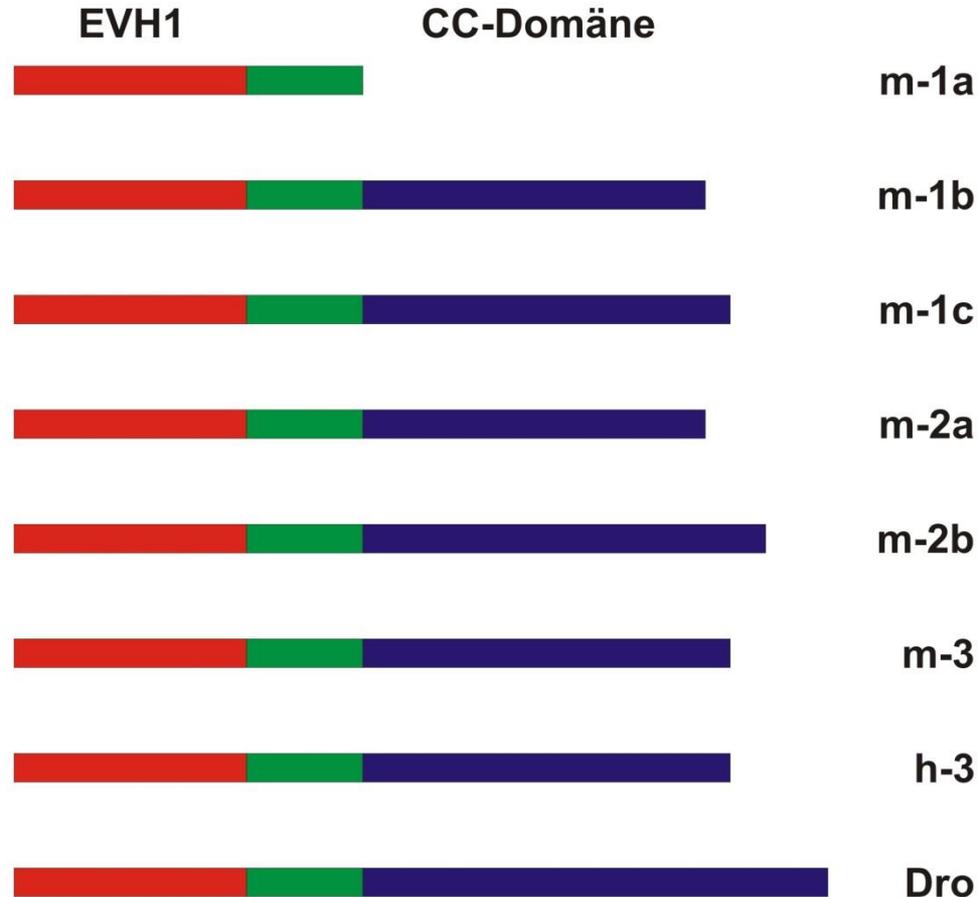
# PSD-Protein : Rezeptor Wechselwirkung



# Homer und mGlutamat-Rezeptoren



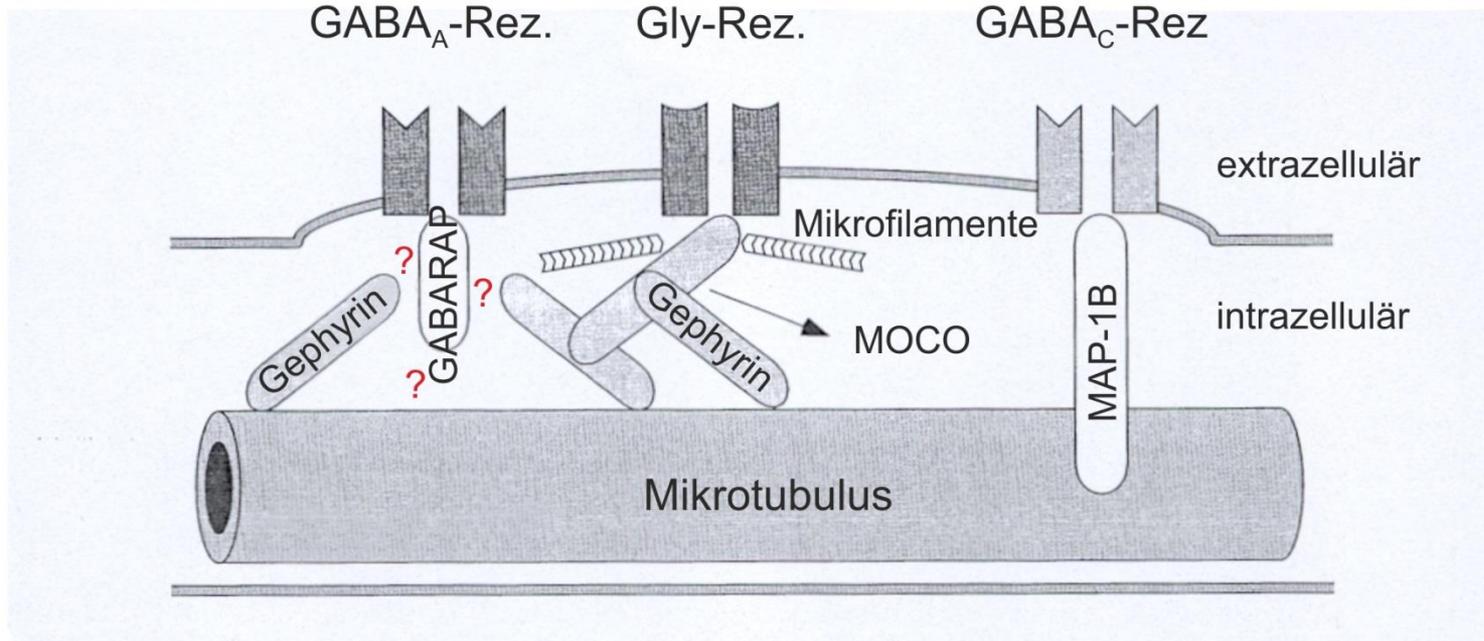
# Aufbau verschiedener Homer-Proteine



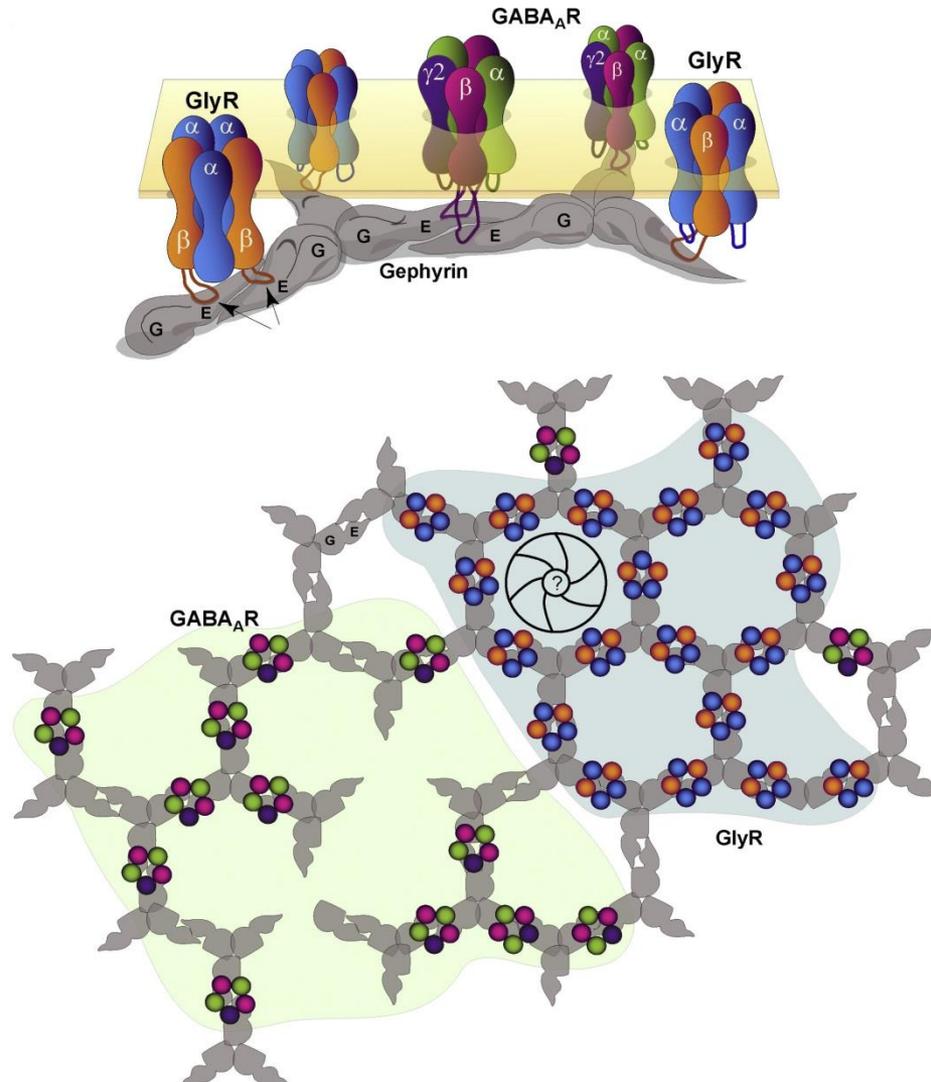
EVH1 = Ena/VASP Homologie 1-Domäne

CC-Domäne = Coiled-Coil Domäne

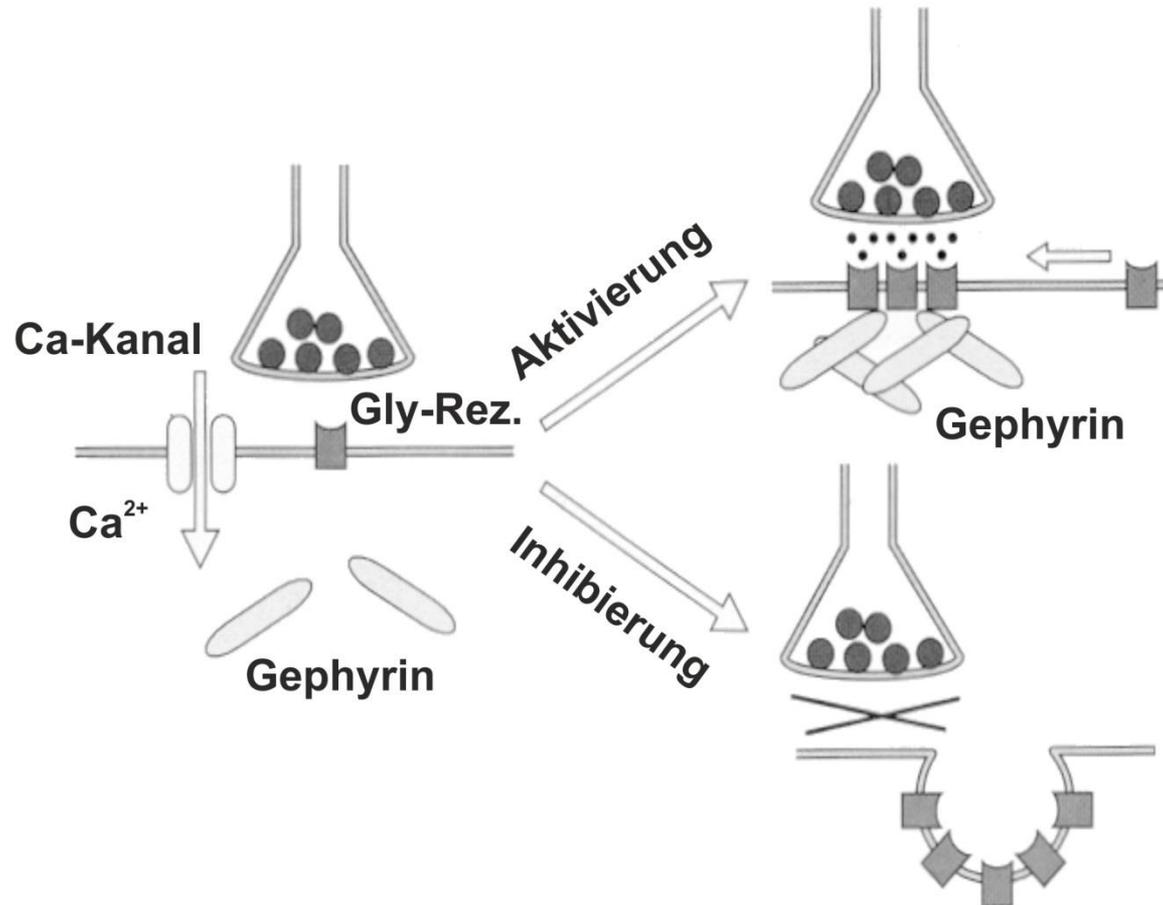
# Verankerung inhibitorischer Rezeptoren



# Verankerung inhibitorischer Rezeptoren

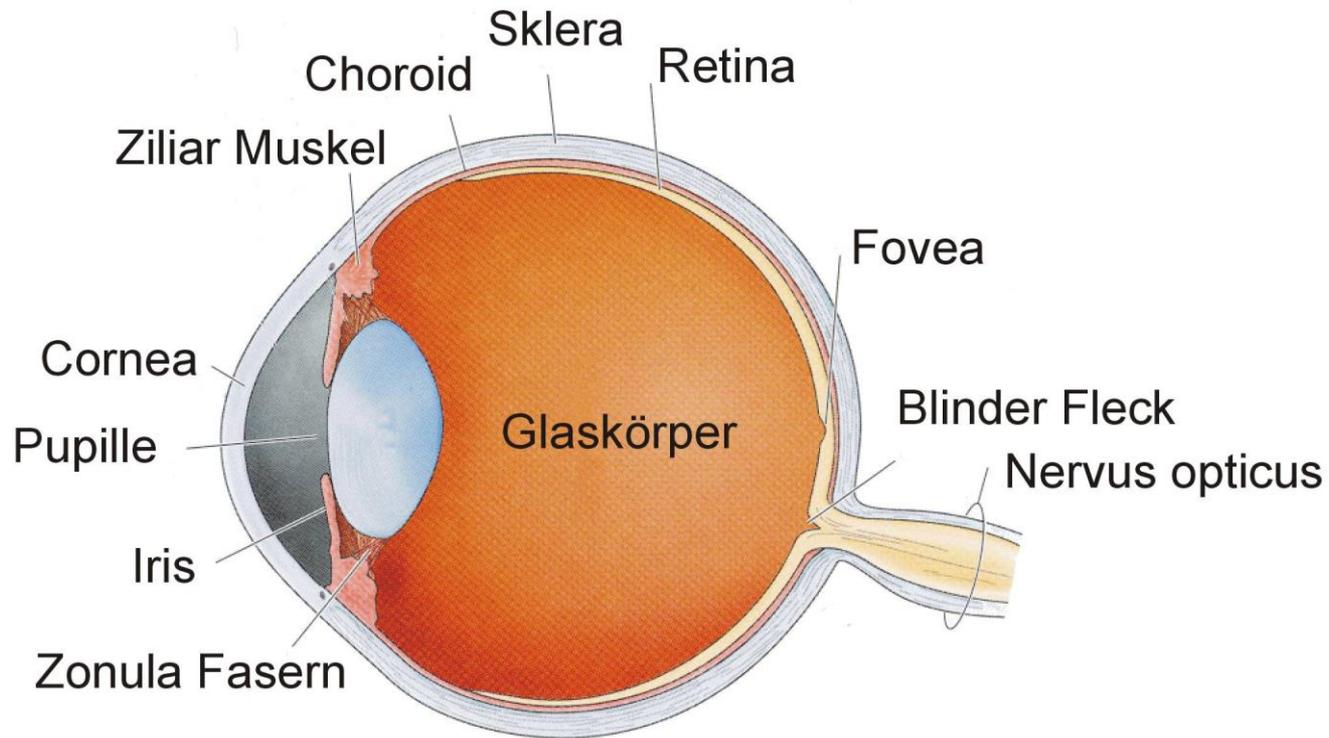


# Gephyrin und Glycin-Rezeptoren

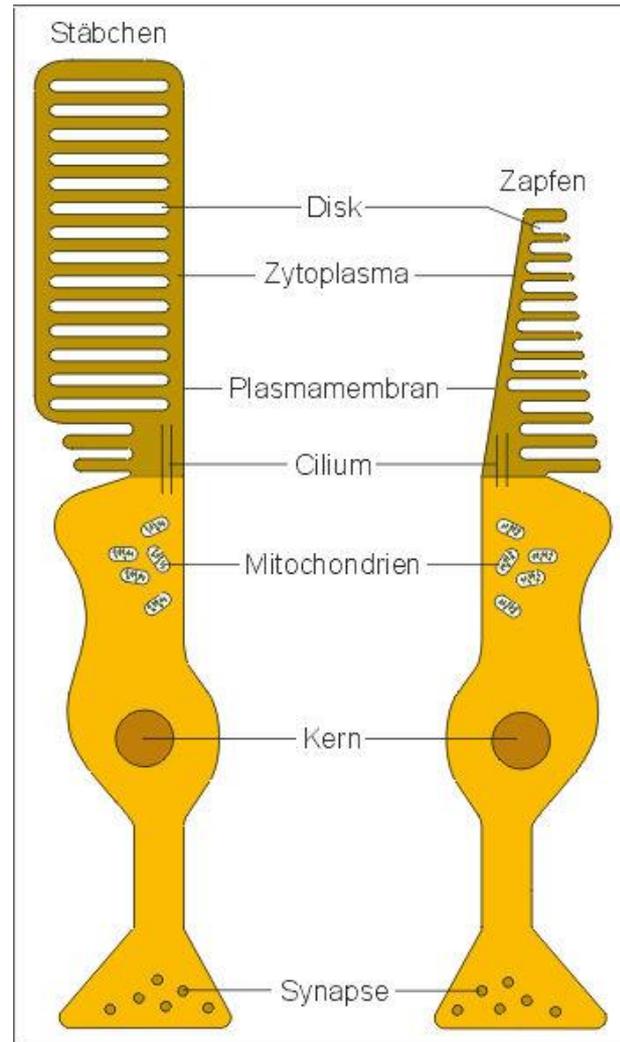


# **Signalkomplexe in der Sinnesphysiologie**

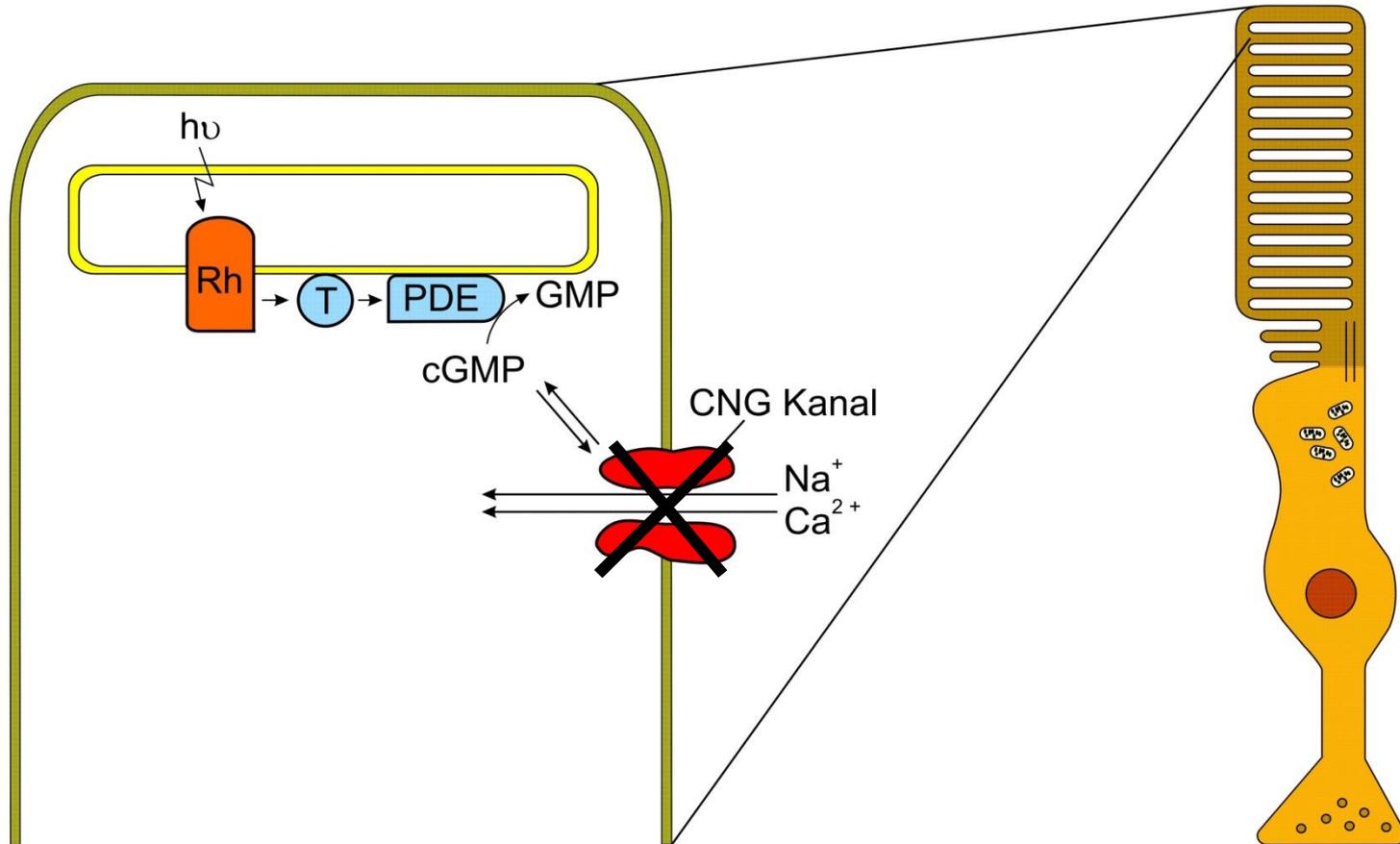
# Phototransduktion bei Wirbeltieren



# Phototransduktion bei Wirbeltieren

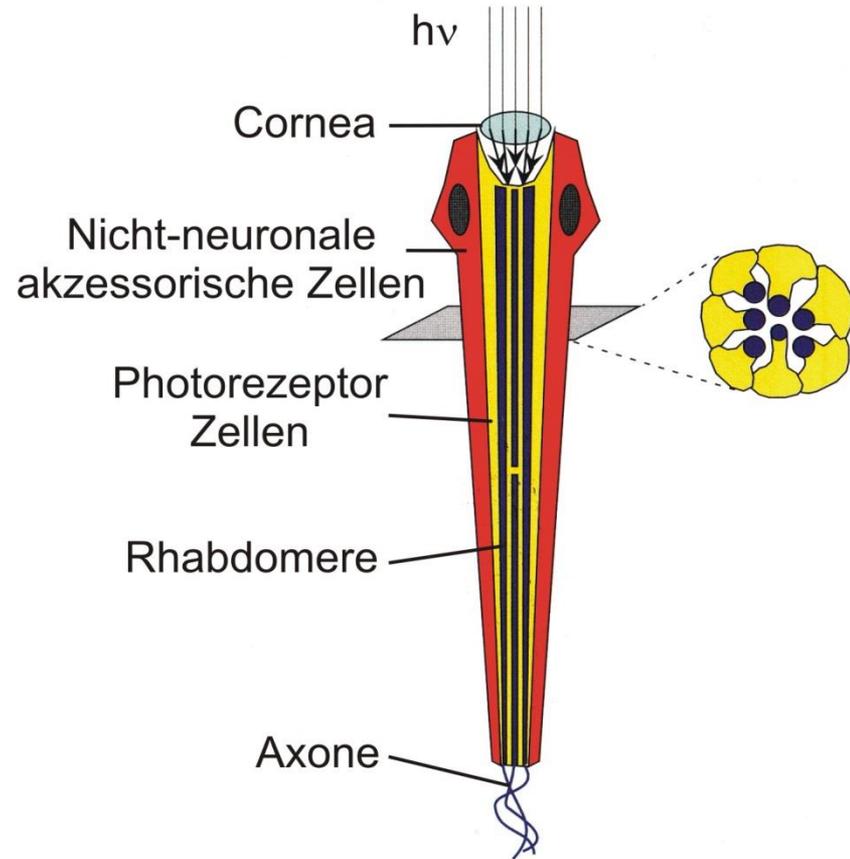
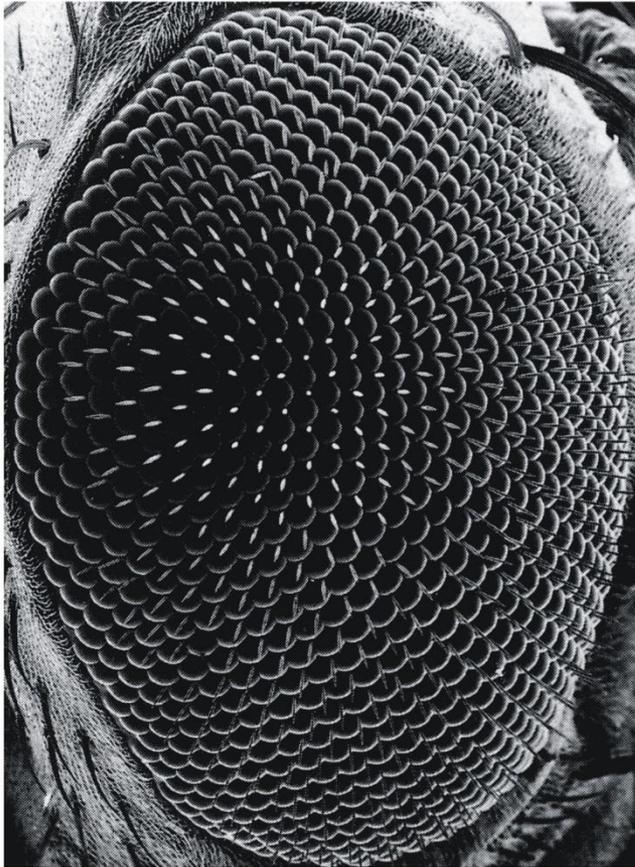


# Phototransduktion bei Wirbeltieren

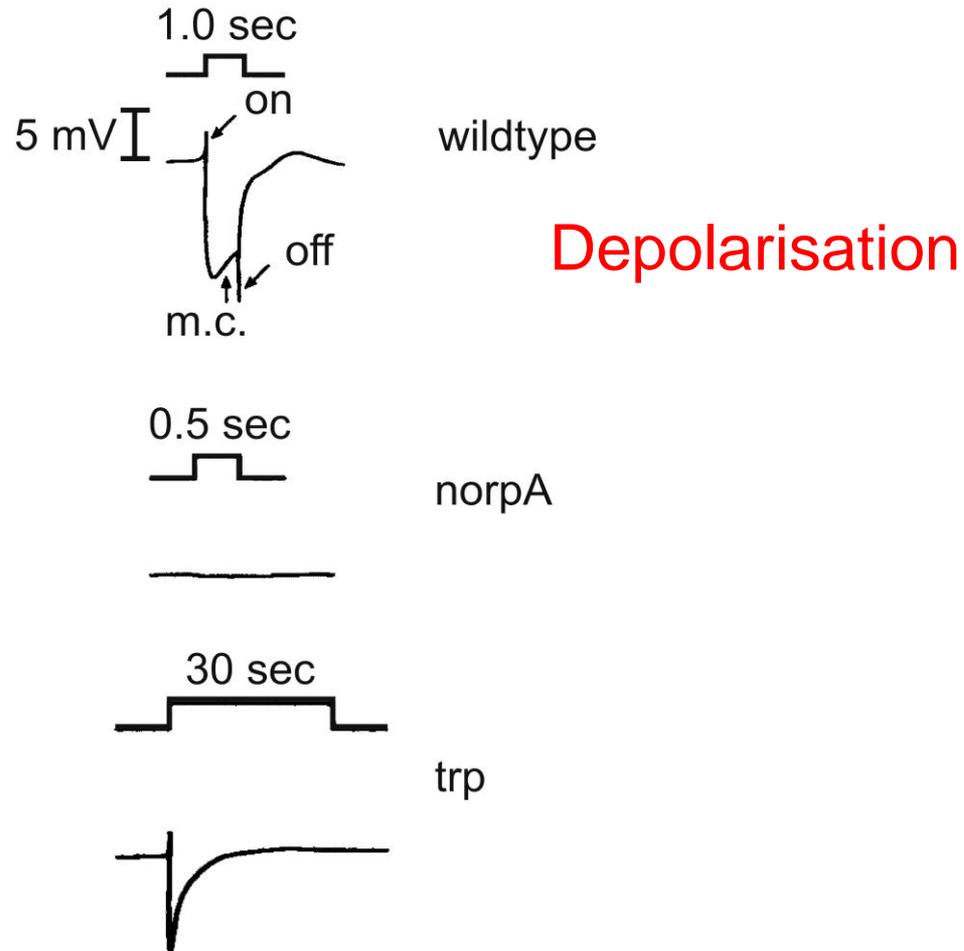


Hyperpolarisation

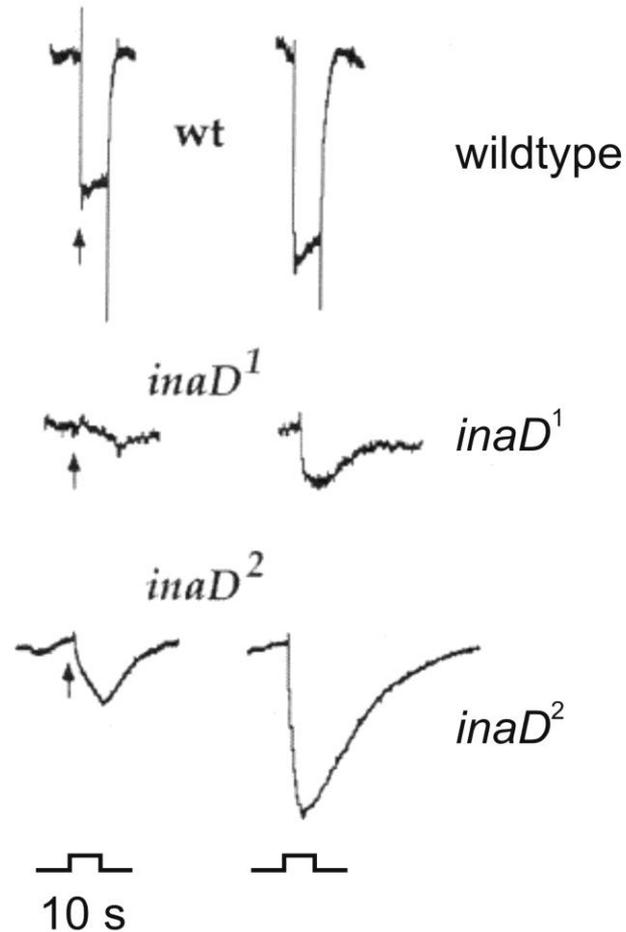
# Phototransduktion bei Drosophila



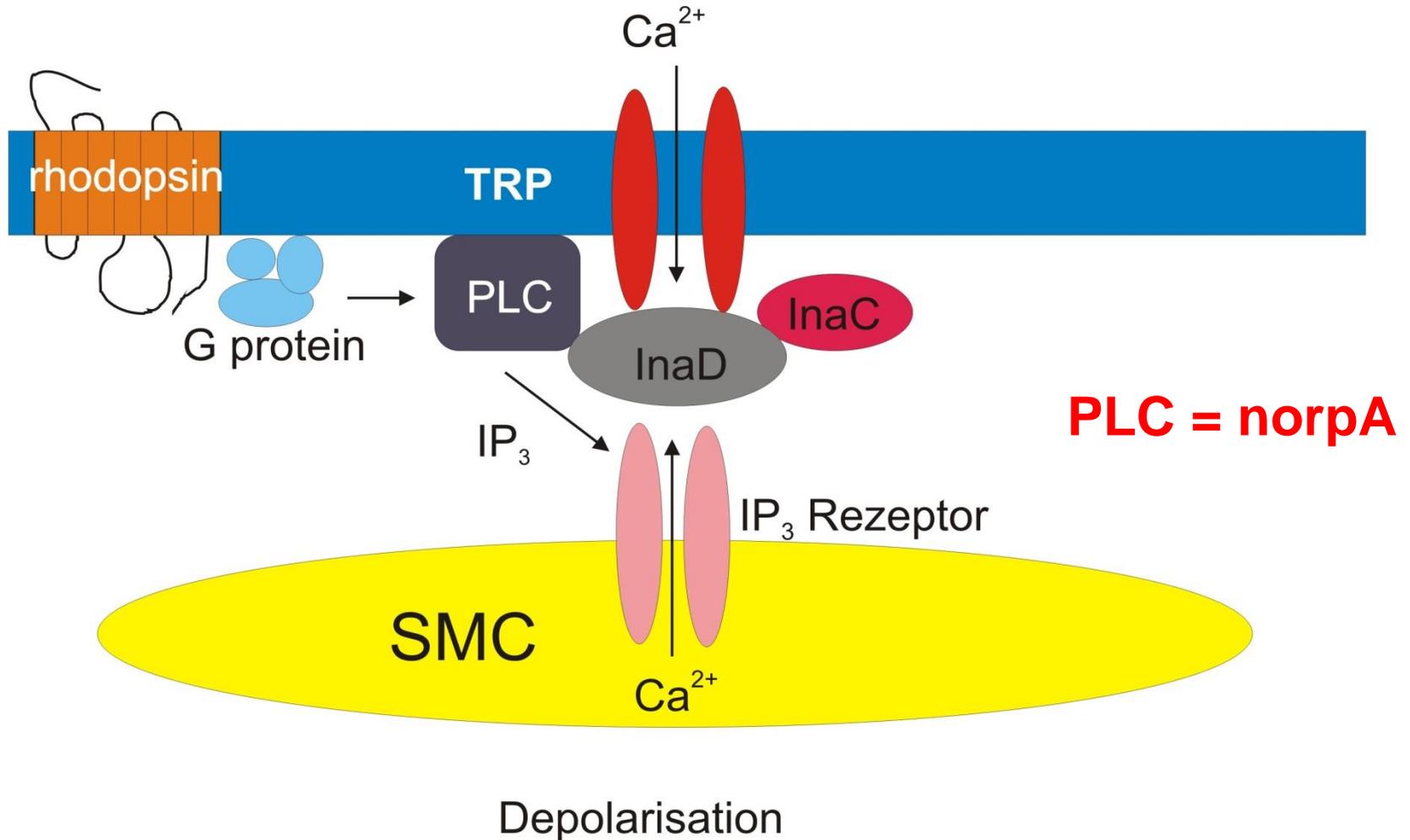
# Phototransduktion bei Drosophila



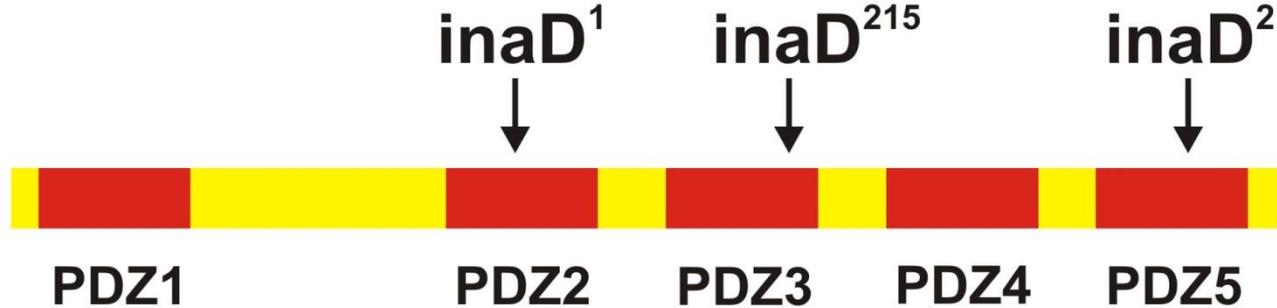
# InaD Mutationen und die Lichtantwort



# Phototransduktion bei Drosophila

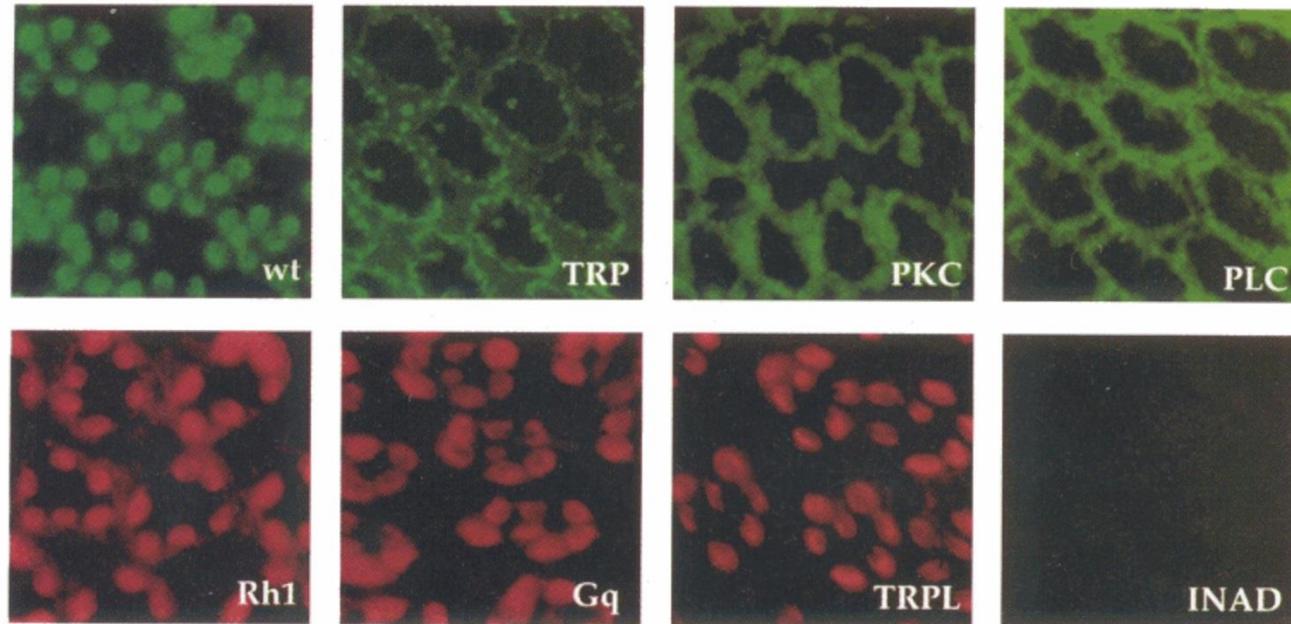


# Aufbau des InaD-Proteins



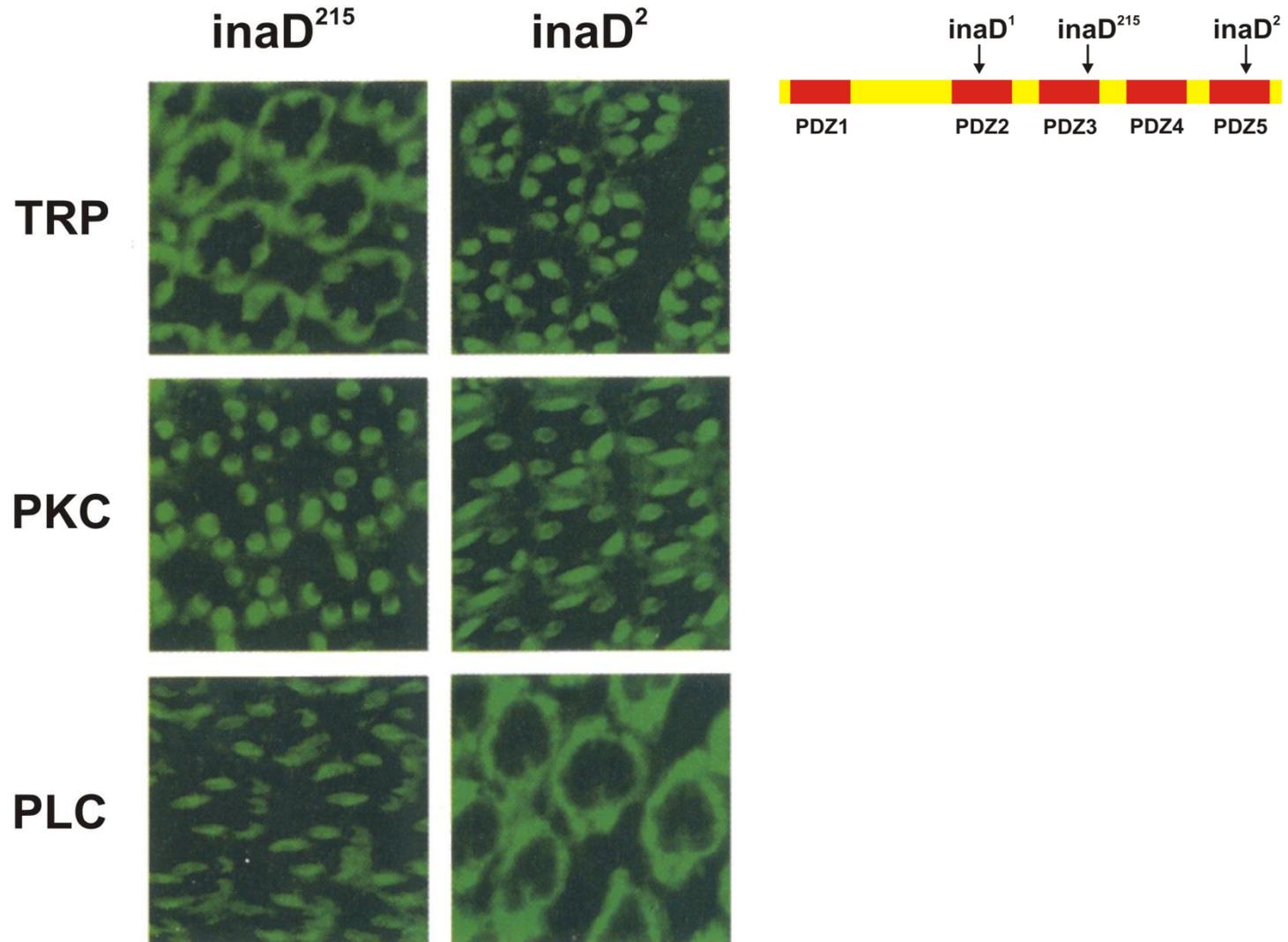
Mutationen in einzelnen PDZ Domänen

# Auswirkung der InaD-Mutationen

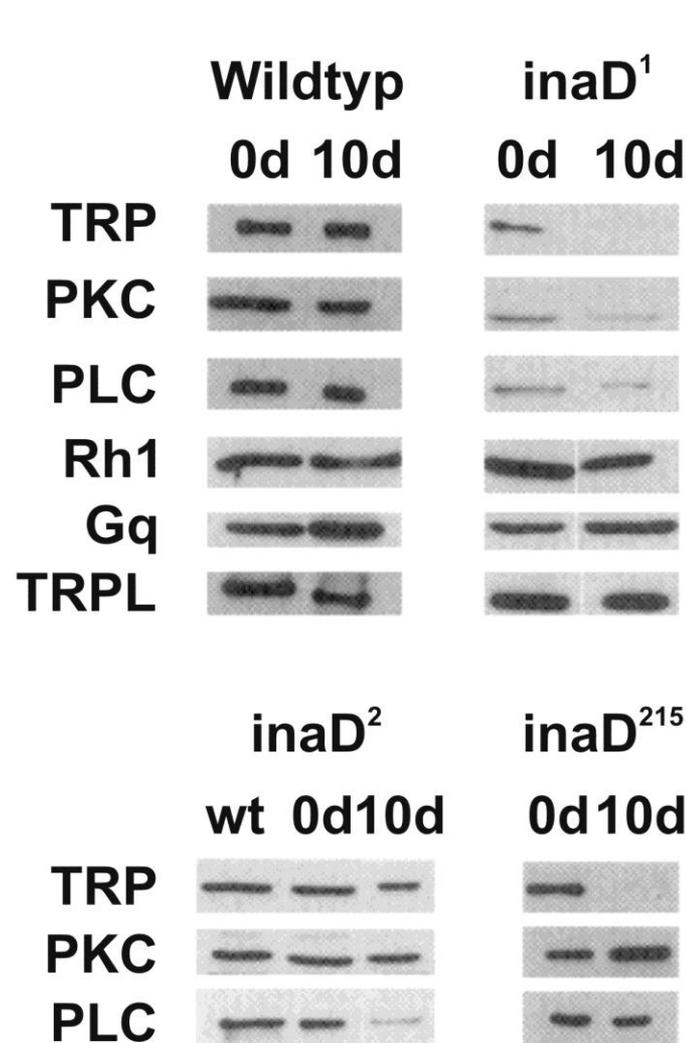


Immunhistologische Färbungen, Drosophila Komplexauge

# Auswirkung der InaD-Mutationen

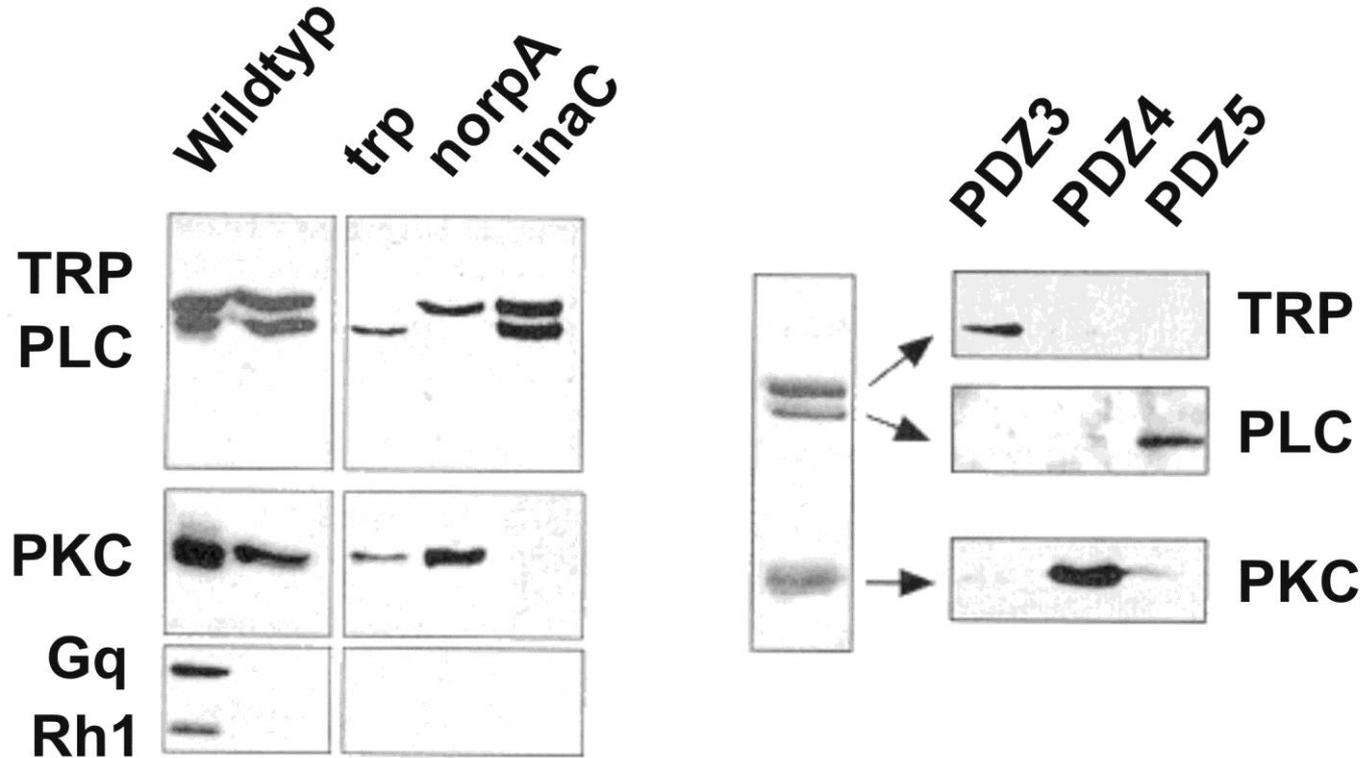


# InaD und Proteininstabilität



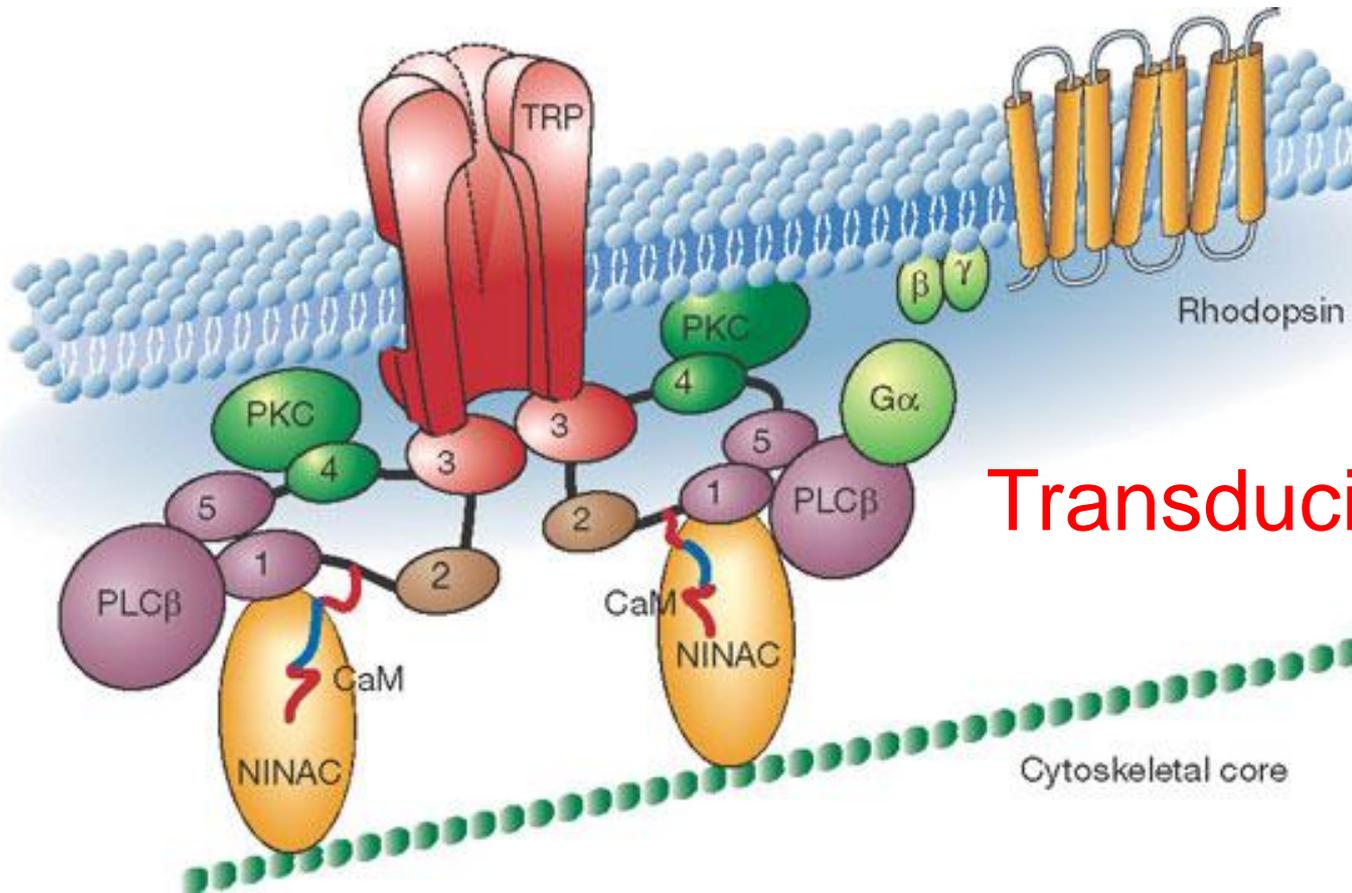
## Western Blot Analyse

# InaD und Wechselwirkungspartner



Immunpräzipitation mit anschließendem Western Blot

# Phototransduktion bei Drosophila



Transducisome

