

# Protein Interaction Kits



## Quality

- Over 95 % customer satisfaction
- Highly reduced false positive rate due to optimized technologies

## Flexibility

- A solution for all protein classes!
- Extensive cDNA library collection available

## Technology

- High quality swiss made products
- Developed and patented by Dualsystems Biotech AG

## Price

- All in one packages for a sensational price!



## Find novel interacting partners for your protein of interest

Custom screening systems for all protein classes:	Cytosolic proteins	Membrane proteins	Nuclear proteins	Organelle proteins	Fragments, domains	
DUALhybrid system (Yeast two-hybrid)	✓	✗	✓	✗	✓	<ul style="list-style-type: none"> <li>• <i>In vivo</i> systems</li> <li>• No need for protein purification</li> <li>• Direct information on binary interactions</li> </ul>
DUALmembrane system	✗	✓	✗	✓	✗	
DUALhunter system	✓	✗	✓	✗	✓	

## DUALhybrid kit

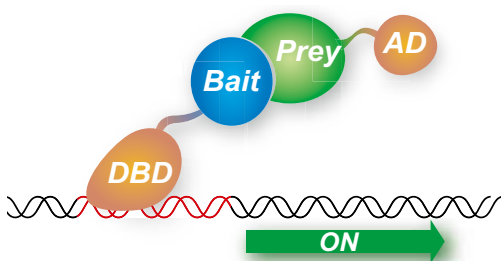
Investigate protein interactions involving cytosolic proteins, protein domains or fragments

- Quickly identify novel protein-protein interactions
- Detect protein interactions *in vivo*
- Identify new interactors by cDNA library screening
- Normalized cDNA libraries increase coverage and reduce non-specific interactions
- Our triple reporter system only identifies highly specific interactions

### DUALhybrid kit P01004



Component	Amount
pLexA-N bait vector	5 µg
pLexA-C bait vector	5 µg
pGAD-HA prey vector	5 µg
pY3H bridge vector	5 µg
pLexA-p53 control bait vector	5 µg
pLexA-laminC control bait vector	5 µg
pACT-largeT control prey vector	5 µg
NMY51 yeast reporter strain	1 vial



The bait is expressed in yeast as a fusion protein with the DNA-binding domain (DBD) of a yeast transcription factor. The prey is expressed in the same yeast cell as a fusion protein with the activation domain of the same transcription factor. Upon interaction of bait and prey, the transcription factor is reconstituted and activates the reporter gene (green arrow), resulting in growth of the yeast cells under selection.

### Selected list of successfully performed DUALhybrid screens

Buxbaum *et al.* *Mol. Psychiatry* Apr 17 (2007)  
 Ahnesorg *et al.* *Cell* 124:301-313 (2006)  
 Nagy *et al.* *Hearing Research* 204:216-222 (2005)

Hipp *et al.* *J. Biol. Chem.* 279:16503-16510 (2004)  
 Burklen *et al.* *Mol. Cell. Biochem.* 297:53-64 (2007)

## DUALmembrane kits

The most powerful system on the market to study interactions involving membrane proteins in living cells

### DUALmembrane starter kits:

- All-in-one package
- Choose the bait vector according to your needs
- Choose a cDNA library from our collection
- All reagents for screening included
- Very attractive pricing

#### DUALmembrane starter kits

P01201 – P01229

P01301 – P01329

P01401 – P01429



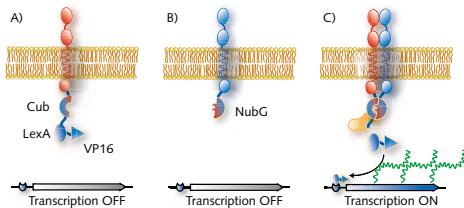
Component	Amount
Bait vector of choice	5 µg
Library vector pPR3-N	5 µg
cDNA library of choice	60 µg
Control vectors	5 µg each
Reporter strain	1 vial
Yeast transformation kit	1 kit
HTX Beta-Gal kit	1 kit

### DUALmembrane pairwise interaction kit:

- Investigate pairwise interactions
- All membrane protein classes accessible
- Map interaction domains

#### DUALmembrane pairwise interaction kit P01501

Component	Amount
pBT3-N bait vector (Type II bait vector)	5 µg
pBT3-C bait vector (Type I bait vector)	5 µg
pBT3-SUC (Type I signal sequence bait vector)	5 µg
pBT3-STE (Type I leader sequence bait vector)	5 µg
pPR3-N (Prey vector)	5 µg
pPR3-C (Prey vector)	5 µg
pPR3-SUC (Signal sequence prey vector)	5 µg
pPR3-STE (Leader sequence prey vector)	5 µg
pOST1-Nubl control vector	5 µg
pTSU2-APP control vector	5 µg
pNubG-Fe65 control vector	5 µg
NMY51 yeast reporter strain	1 vial
Yeast transformation kit	1 kit
HTX Beta-Gal kit	1 kit



Interaction of bait (A) and prey (B) at the membrane leads to reconstitution of split-ubiquitin through the interaction of Cub and NubG. Split-ubiquitin is cleaved by specific proteases to release the transcription factor, which enters the nucleus and activates reporter genes (C), resulting in growth of the yeast cells under selection.

## DUALhunter kits

Go beyond classical yeast two-hybrid and screen self-activating proteins like transcription factors

### DUALhunter starter kit:

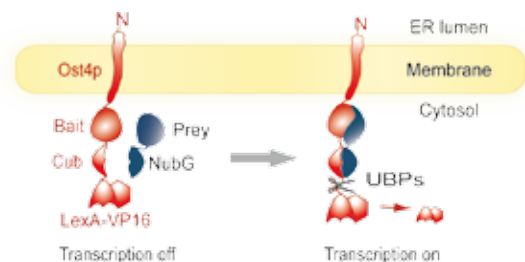
- All-in-one package
- Choose a cDNA library from our collection
- All reagents for screening included

- Very attractive pricing
- Screen your transcription factor of interest against a cDNA library of your choice and identify novel interacting partners!

#### DUALhunter starter kits

P01601-P01629

Component	Amount
pDHB1 bait vector	5 µg
pPR3-N prey vector	5 µg
pDHB1-large T control bait vector	5 µg
pDSL-p53 control prey vector	5 µg
pOST1-Nubl control vector	5 µg
NMY51 yeast reporter strain	1 vial
cDNA library of choice	60 µg
Yeast transformation kit	1 kit
HTX Beta-Gal kit	1 kit



Interaction of bait (red) and prey (blue) at the membrane leads to reconstitution of split-ubiquitin through the interaction of Cub and NubG. Split-ubiquitin is cleaved by specific proteases to release the transcription factor, which enters the nucleus and activates reporter genes, resulting in growth of the yeast cells under selection.



**Our technologies are available as kits and custom services.**

**Our satisfied customers say:**

«We got interesting results which provided good leads to go on...»

*Smiljka Vikić-Topic, M.Sc., Contract Research Manager,  
Research Management Office, PLIVA Pharmaceutical Industry Inc.*

«You picked up some very important and relevant interacting proteins which will clearly lead to publications»

*Prof. David Schubert, The Salk Institute for Biological Studies,  
Cellular Neurobiology, San Diego, CA, USA*

«We have used Dualsystems' screening services and we have found the support very competent and helpful. Regular updates and scientific assistance were provided throughout the screen.»

*Monica Gotta, Associate Professor, University of Geneva, Switzerland*

«I have used Dualsystems services for several yeast two-hybrid screens. I am very satisfied with the excellent service and I have repeatedly recommended the company to my colleagues and collaborators.»

*Nicolas Ruggli, Dr. med.vet., Institute of Virology and Immunoprophylaxis, Mithelhäusern, Switzerland*