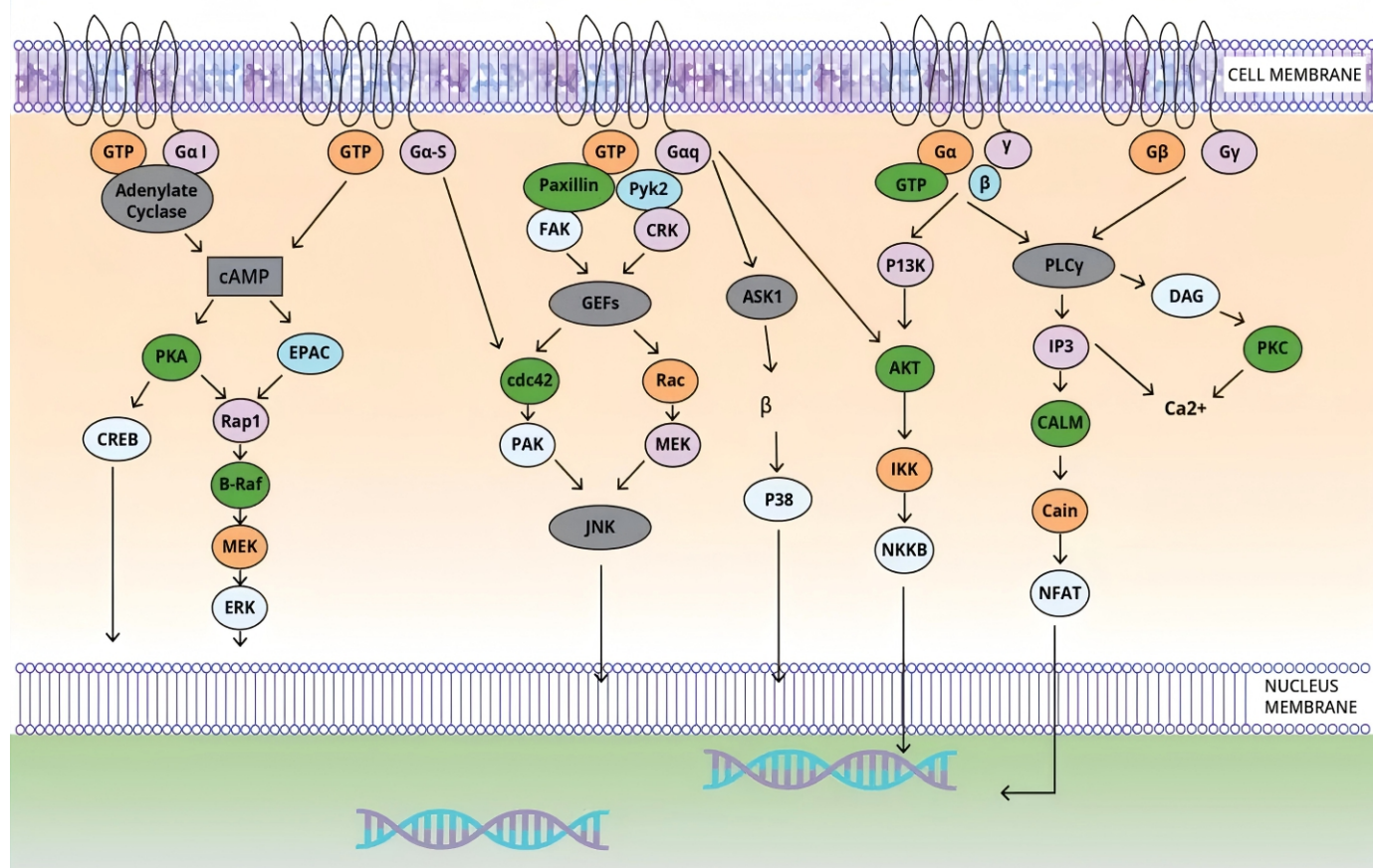


GPCR Signaling Pathways

G protein-coupled receptors (GPCRs) regulate diverse cellular responses through complex signaling networks. Biorbyt provides comprehensive tools to support every stage of GPCR research.

FIGURE 1: GPCR SIGNALLING



Explore Biorbyt's GPCR Research Portfolio

Comprehensive solutions covering GPCR detection, signaling analysis, functional modulation, and advanced protein research for pharmacology and drug discovery workflows.

GPCR Antibodies

Native receptors, phospho-targets and signaling proteins

Agonists & Antagonists

Selective compounds for pathway activation and inhibition

Second Messengers

cAMP, DAG, IP3 and calcium-related assay tools

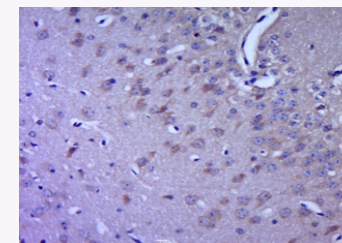
Signal Regulators

G proteins, GRKs, β-arrestins, kinases and effectors

GPCR Proteins

Suitable ECDs, full-length receptors and nanodisc formats

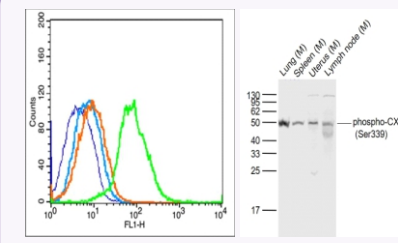
Featured GPCR Products



5HT2A Receptor Rabbit Polyclonal Antibody

orb500773

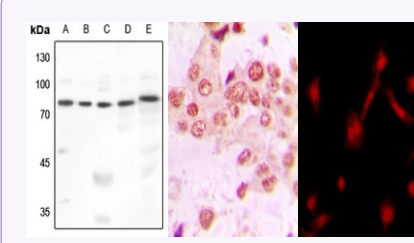
ELISA IF IHC-Fr IHC-P



Phospho-CXCR4 (Ser339) Rabbit Polyclonal Antibody

orb156502

FC WB



GRK2 Rabbit Polyclonal Antibody

orb213536 · KO/KD Validated

WB IF IHC-P

More GPCR Pathway Research Products

Selected Biorbyt antibodies, inhibitors, signaling assay kits and recombinant GPCR proteins

Antibody

Beta arrestin 1 Rabbit Polyclonal Antibody
orb221344
IF | IHC-Fr | IHC-P | WB

Antibody

GRK5 Rabbit Polyclonal Antibody
orb582463
IHC | WB

Antibody

PKA alpha + beta Rabbit Polyclonal Antibody
orb11275
ICC | WB

GPCR Protein

Human GPRC5D Protein
hFc-His Tag
orb689414
Purity: >95%

Gas inhibitor

GN13
orb1910074
Purity: >98%

PLCβ inhibitor

PLC-β-IN-1
orb3135665
PLCβ pathway inhibition

ELISA kit

Horse Cyclic Adenosine Monophosphate (cAMP) ELISA Kit
orb782473
312.5–20000 pg/mL

ELISA kit

Pig Inositol Triphosphate (IP3) ELISA Kit
orb782667
156.25–10000 pg/mL

Custom Service

From GPCR protein expression to antibody development, Biorbyt provides customized solutions including

Recombinant antibodies

Monoclonal and polyclonal antibodies

Nanobody development

Full-length membrane proteins

Extracellular domains (ECDs)

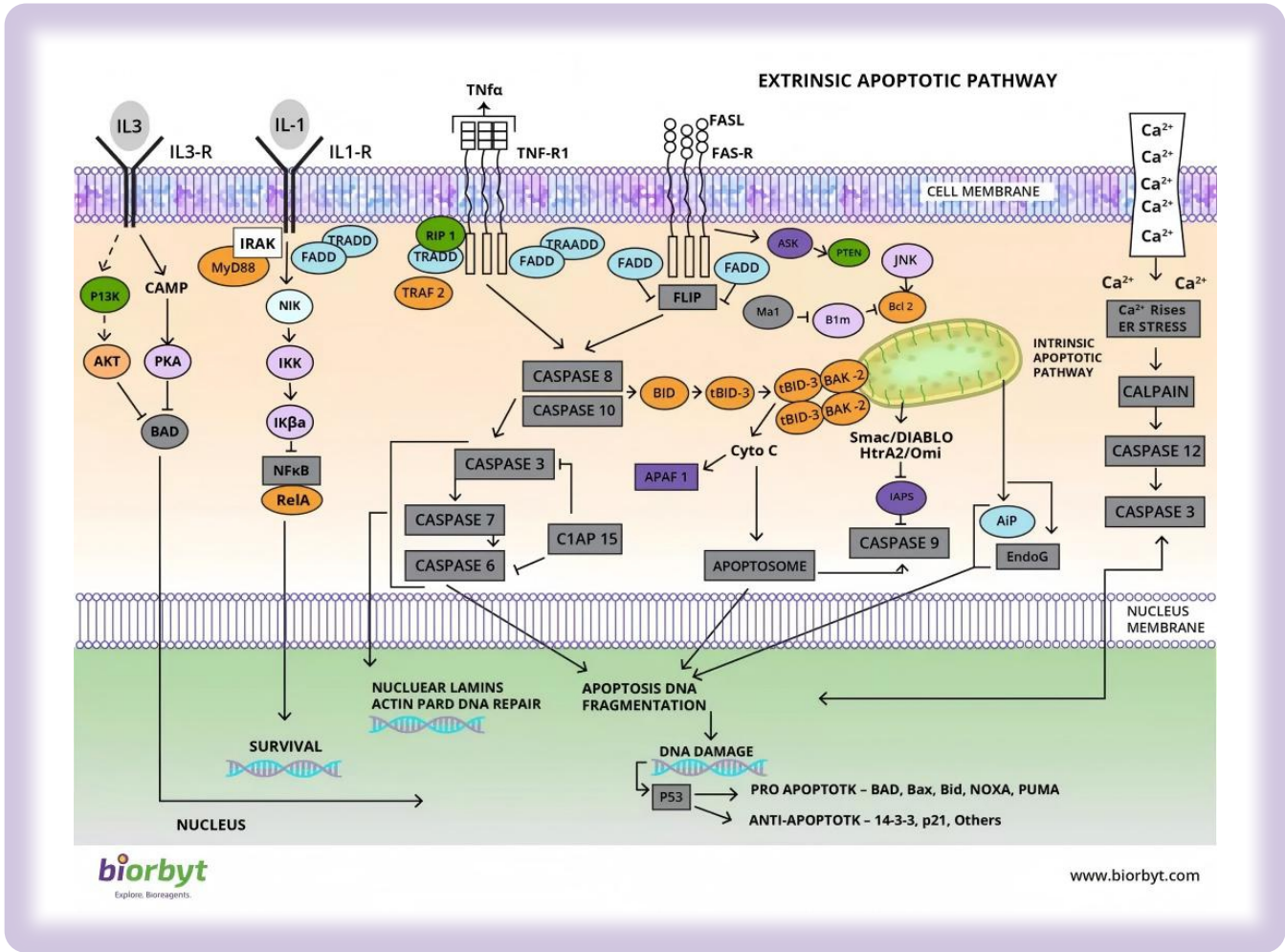
Antibody conjugation

Peptide synthesis

Apoptosis Signaling Pathway

Research tools for programmed cell death, caspase activation and mitochondrial signaling studies

- Apoptosis is a highly regulated form of programmed cell death that is essential for embryonic development, immune homeostasis, tissue renewal and the removal of damaged or potentially harmful cells.
- Apoptotic cells undergo characteristic biochemical and morphological changes, including cell shrinkage, membrane blebbing, chromatin condensation, DNA fragmentation and the formation of apoptotic bodies.
- Dysregulation of apoptosis contributes to many human diseases. Insufficient apoptosis can promote cancer and autoimmune disease, whereas excessive apoptosis is associated with neurodegeneration, tissue injury and degenerative disorders.



Hot Pathway Targets

- Fas FasL DR4 DR5 Caspase-8 BID BAX BAK BCL-2 BCL-XL MCL1 Cytochrome c APAF1 Caspase-9 Caspase-3
- Caspase-7 Cleaved PARP1 p53

Explore Signaling Pathway Research Products at **biobyte.com**
For Research Use Only

Apoptosis Signaling Pathway Products

Research reagents for death-receptor signaling, mitochondrial apoptosis and caspase activation

Biorbyt offers antibodies, apoptosis-detection kits, activity assays, ELISA kits and recombinant proteins for studying the initiation, regulation and execution of apoptosis.

Biorbyt Advantages

01 Broad Apoptosis Pathway Coverage

Products covering death receptors, BCL-2 family proteins, mitochondrial signaling, caspases and downstream apoptosis markers.

02 Multiple Apoptosis Readouts

Analyse apoptosis using Annexin V staining, TUNEL detection, caspase activity, protein cleavage, immunostaining and quantitative ELISA.

03 Multiple Product Formats

Choose from primary antibodies, cleavage-specific antibodies, detection kits, functional activity assays, ELISA kits and recombinant proteins.

Featured Apoptosis Antibodies

Catalogue No.	Product Name	Tested Reactivity	Tested Applications
orb213644	Caspase 3 Rabbit Polyclonal Antibody	Bovine, Canine, Human, Monkey, Mouse, Rat, Zebrafish	IF, IH, KO/KD Validated, WB
orb126608	Caspase-3 (Cleaved-Asp175) Antibody	Human, Mouse, Rat	IHC, WB
orb10241	Caspase-8 Rabbit Polyclonal Antibody	Human, Rat	FC, IF, IHC-Fr, IHC-P, WB
orb4655	Bax Rabbit Polyclonal Antibody	Human, Mouse, Rat	FC, ICC, IF, IHC-Fr, IHC-P, WB
orb100697	Bcl-2 Rabbit Polyclonal Antibody	Human, Mouse	FC, ICC
orb10168	Bak Rabbit Polyclonal Antibody	Human, Mouse	FC, IF, IHC-Fr, IHC-P, WB
orb1239348	TNFRSF10B/DR5 Antibody	Human, Mouse, Rat	ELISA, IF, IHC-P, WB
orb127957	Cytochrome c Antibody	Human, Mouse, Rat	IHC, WB
orb766983	Apaf-1 Rabbit Polyclonal Antibody	Human, Mouse, Rat	ELISA, IF, IHC, WB
orb323122	Cleaved PARP1 Antibody	Human	IHC, WB

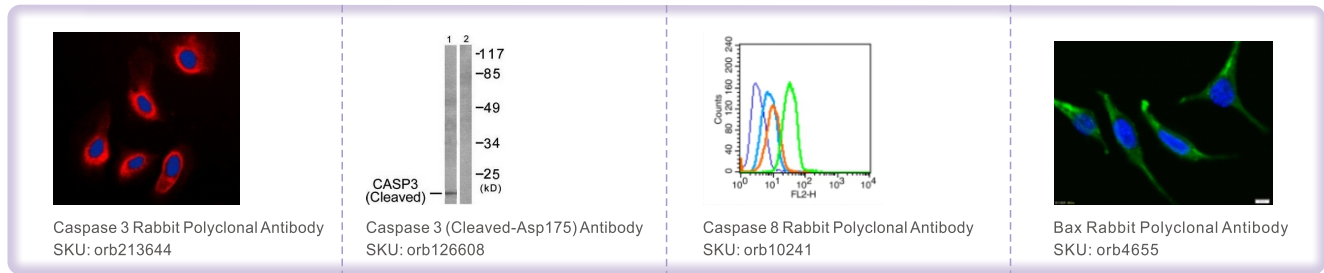
Featured Apoptosis Recombinant Proteins

Catalogue No.	Product Name	Expression System	Tag	Molecular Weight	Purity
orb1516789	Recombinant Human Caspase-3 Protein	E. coli	His and MBP	55–60 kDa	Greater than 90%
orb754984	Human Cytochrome C Protein	E. coli	N-terminal His	11.4 kDa	Greater than 95%
orb1516907	Recombinant Human Bcl-2 Protein	E. coli	C-terminal His	24 kDa	Greater than 95%

Apoptosis Detection and Activity Assay Kits

Catalogue No.	Product Name	Assay Principle	Recommended Readout
orb322264	Annexin V-FITC Apoptosis Detection Kit	Annexin V-FITC detects externalised phosphatidylserine; propidium iodide identifies cells with compromised membranes	Flow cytometry or fluorescence analysis
orb1147898	TUNEL Apoptosis Detection Kit, Orange Fluorescence	TdT-mediated fluorescent labelling of DNA strand breaks	Fluorescence microscopy, microplate reader or flow cytometry
orb707372	Caspase-3 Activity Colorimetric Microplate Assay Kit	Colorimetric detection and quantification of Caspase-3 activity	Microplate reader

Featured Validation Data

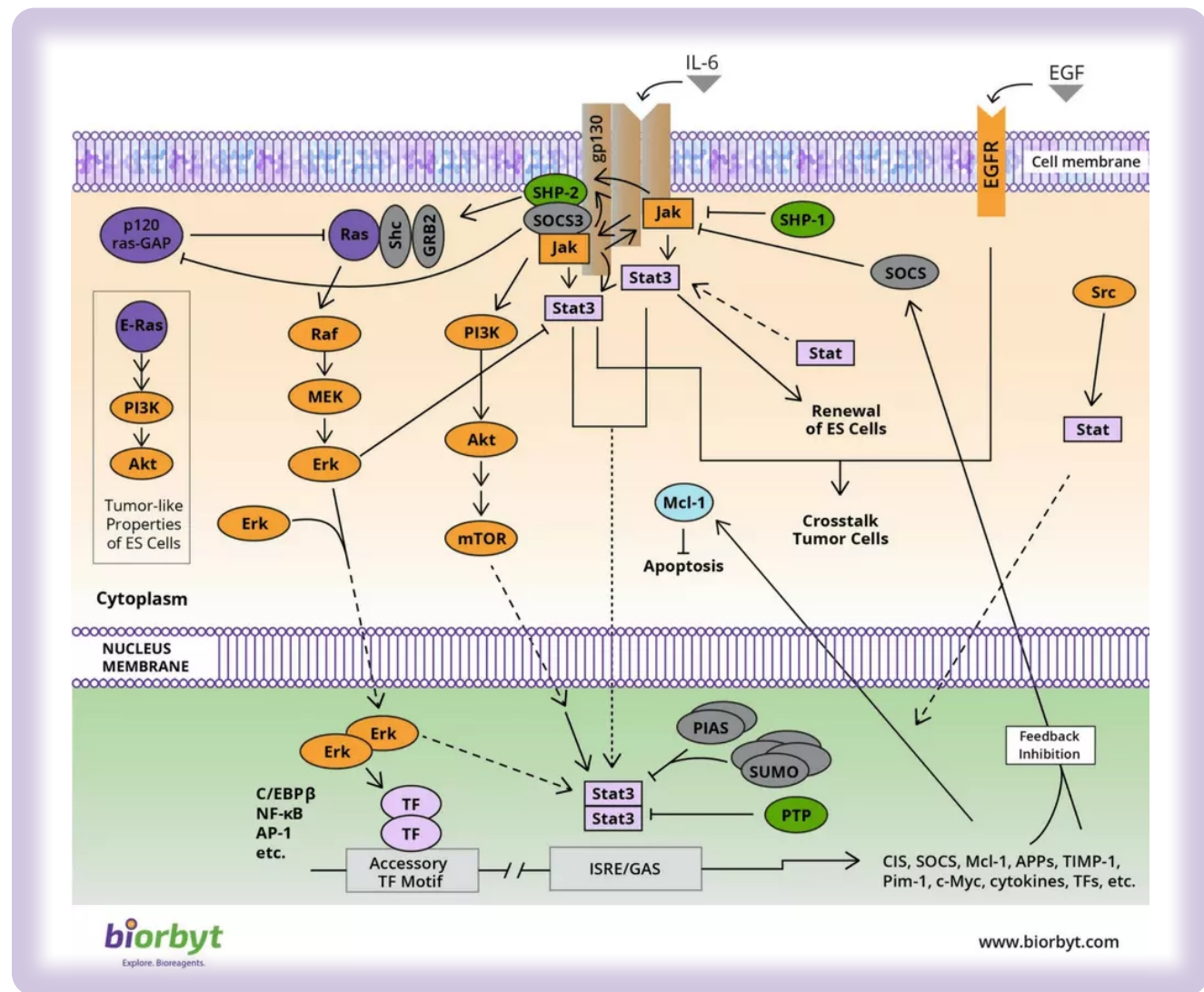


Explore Signaling Pathway Research Products at **biobyte.com**
For Research Use Only

JAK/STAT Signaling Pathway

Research tools for cytokine signalling, immune regulation and cell fate studies

- The Janus Kinase / Signal Transducers and Activators of Transcription (JAK/STAT) pathway is an evolutionarily conserved signaling cascade that mediates cellular responses to cytokines and growth factors. Activation of this pathway regulates proliferation, differentiation, migration, apoptosis and cell survival, and plays key roles in hematopoiesis, immune development, stem cell maintenance, organismal growth and mammary gland development.



Hot Pathway Targets

JAK1 JAK2 JAK3 STAT3 SOCS1 PIAS1 SHP2 MEK2 ERK1/2 PI3KC3 Akt mTOR

Explore Signaling Pathway Research Products at [biorbyt.com](https://www.biorbyt.com)
For Research Use Only

JAK/STAT Signaling Pathway Products

A selection of antibodies for core signaling, regulation and pathway crosstalk

Biorbyt offers pathway-focused antibodies to support JAK/STAT biology, phospho-signaling analysis, immune research and downstream mechanism studies.

Biorbyt Advantages

01 Broad Target Coverage

Core pathway proteins, phospho-targets and regulatory factors

02 Application-Ready Reagents

Suitable for WB, IF, IHC-P, FC, ELISA and more

03 Trusted Research Support

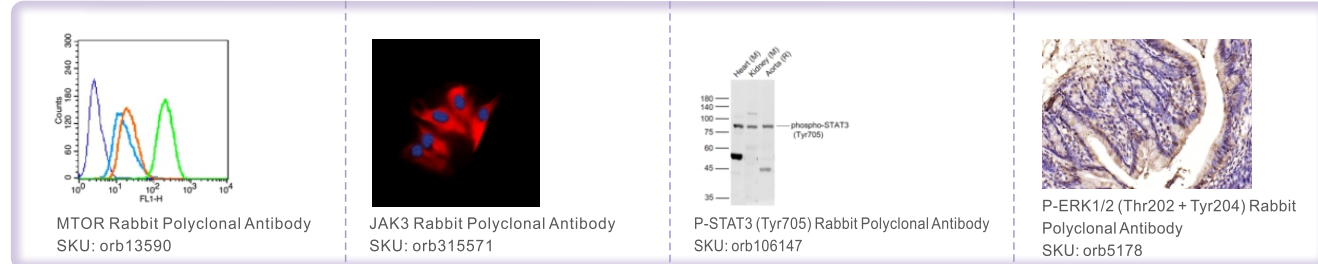
High-quality antibodies and pathway-focused product selection

Biorbyt Featured Products

Catalogue No.	Name	Reactivity	Application
orb214134	JAK1 antibody	Bovine, Canine, Gallus, Human, Mouse, Porcine, Rat	IF, IHC, WB
orb318917	JAK2 antibody	Canine, Human, Monkey, Mouse, Porcine, Rabbit, Rat	IF, IHC, WB
orb315571	JAK3 antibody	Human, Monkey, Mouse	IF, IHC, WB
orb106147	STAT3 (phospho-Tyr705) antibody	Mouse, Rat	WB
orb224046	SOCS1 antibody	Bovine, Human, Mouse, Porcine, Rat	IF, WB
orb1928729	MEK2 antibody	Human, Mouse	IF, IHC-P, WB

Catalogue No.	Name	Reactivity	Application
orb5178	ERK1/2 (phospho-Thr202/Tyr204) antibody	Human, Mouse	FC, ICC
orb176694	PIAS1 antibody	Human, Mouse, Rat	ICC, IHC, WB
orb14691	SHP2 antibody	Human, Mouse, Rat	IF, IHC, WB
orb1933074	PI3KC3 antibody	Human	IF, IHC-P, WB
orb344403	Akt (phospho-S473) antibody	Human, Monkey, Mouse, Rat	ELISA, IF, IHC, Multiplex Assay, WB
orb13590	mTOR antibody	Human, Mouse, Rat	FC, ICC, IF, IHC-Fr, IHC-P, WB

Featured Validation Data

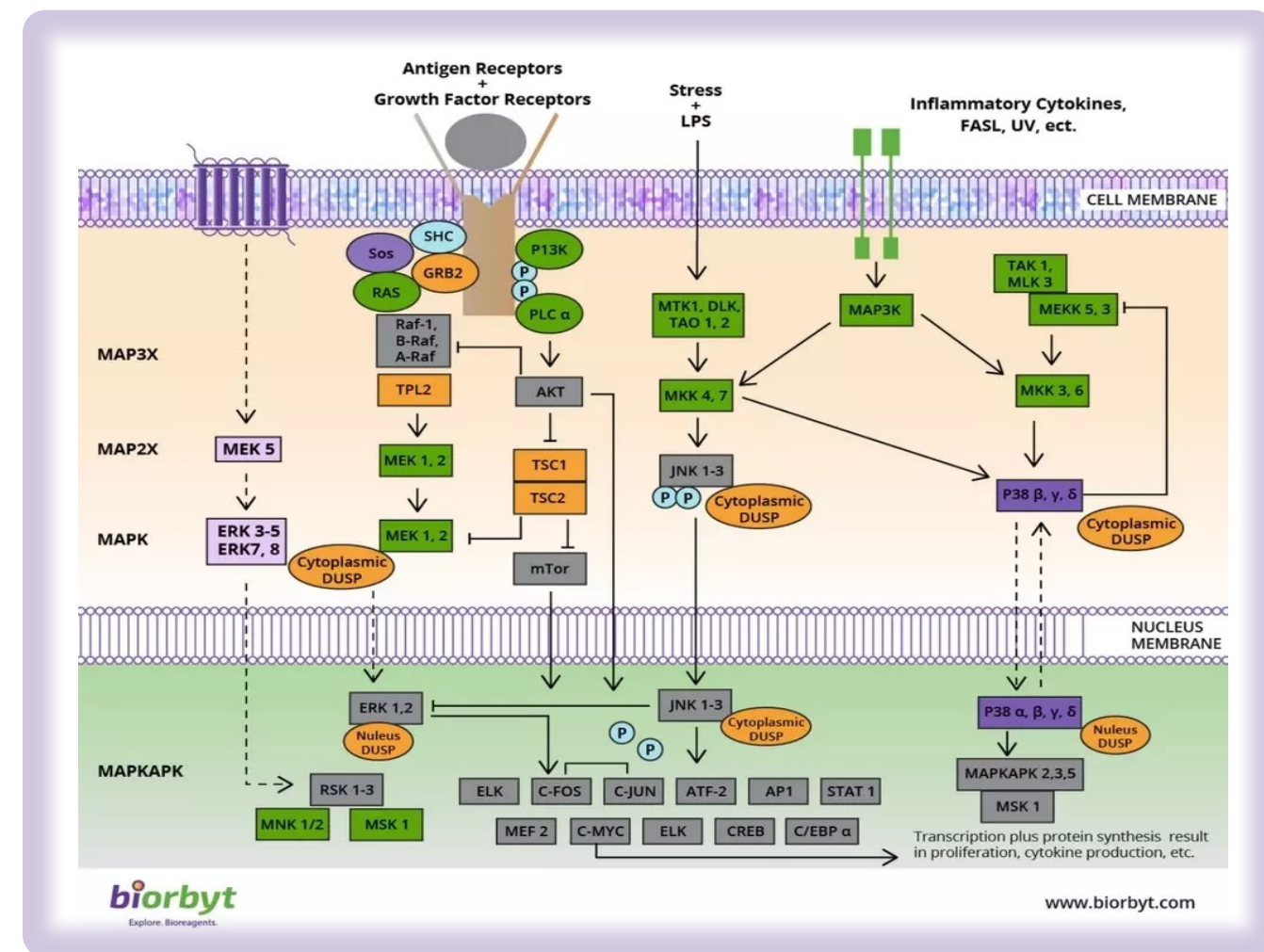


Explore Signaling Pathway Research Products at [biorbyt.com](https://www.biorbyt.com)
For Research Use Only

MAPK Signaling Pathway

Research tools for growth factor signaling, cellular stress and cell fate regulation

- The mitogen-activated protein kinase (MAPK) family comprises serine/threonine kinases that transmit extracellular and intracellular signals into coordinated cellular responses. MAPK pathways are activated by diverse stimuli, including growth factors, cytokines, hormones, oxidative stress and endoplasmic reticulum stress.
- Through the ERK, JNK, p38 and other MAPK branches, these signaling cascades regulate cell proliferation, differentiation, migration, survival, inflammation and apoptosis.



Hot Pathway Targets

BRAF RAF1 MEK1 MEK2 ERK1/2 JNK1/2/3 p38 MAPK ERK5 c-Jun DUSP1 ATF2

Explore Signaling Pathway Research Products at **biorbyt.com**
For Research Use Only

MAPK Signaling Pathway Products

A selection of antibodies for mitogenic signaling, cellular stress and pathway regulation

Biorbyt offers pathway-focused antibodies for studying MAPK protein expression, phosphorylation, subcellular localization and downstream transcriptional responses.

Biorbyt Advantages

01 Broad MAPK Cascade Coverage

Products spanning the RAF–MEK–ERK cascade, JNK and p38 stress pathways, ERK5 signaling, downstream transcription factors and pathway regulators.

02 Phospho-Specific Detection

Monitor MAPK activation at key phosphorylation sites, including RAF1 Ser259, ERK1 Thr202/Tyr204, JNK Thr183/Tyr185, p38 Thr180/Tyr182, c-Jun Ser63 and ATF2 Thr69.

03 Application-Ready Reagents

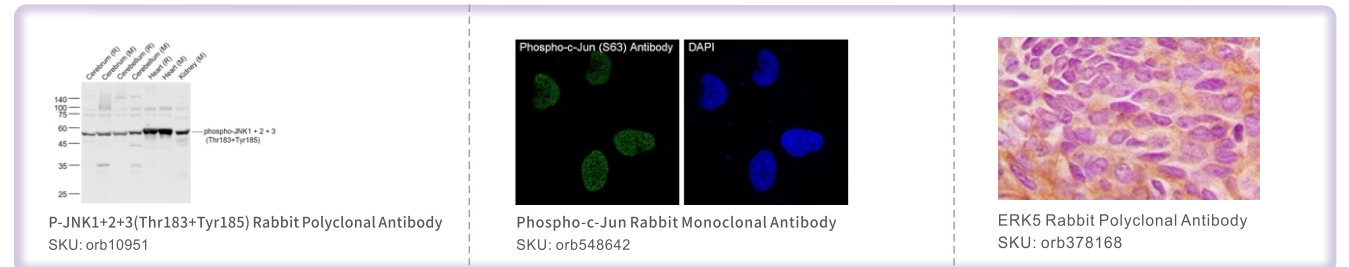
Select antibodies suitable for WB, IF, ICC, IHC, IHC-P, IHC-Fr, FC, IP, ELISA and related experimental workflows.

Biorbyt Featured Products

Catalogue No.	Name	Reactivity	Application
orb625169	BRAF Antibody	Human, Mouse, Rat	ELISA, IHC, WB
orb14749	Raf1 (Phospho-Ser259) Antibody	Human, Mouse, Rat	IHC, WB
orb1932918	MEK1 Antibody (Center S217/221)	Human, Mouse, Rat	IHC-P, WB
orb3085495	MEK2/MAP2K2 Mouse Monoclonal Antibody	Human, Mouse, Rat	FC, ICC, IF, IHC, WB
orb783430	Phospho-ERK1 (Thr202/Tyr204) + ERK2(Thr183/Tyr185) Rabbit Polyclonal Antibody	Human, Mouse, Rat	FC, IF, IHC
orb6259	JNK1+JNK2+JNK3 Rabbit Polyclonal Antibody	Human, Mouse, Rat	FC, ICC, IF, IHC-Fr, IHC-P, WB

Catalogue No.	Name	Reactivity	Application
orb10951	Phospho-JNK1+2+3(Thr183+Tyr185) Rabbit Polyclonal Antibody	Human, Mouse, Rat	FC, IF, IHC-Fr, IHC-P, WB
orb11208	Phospho-P38 MAPK (Thr180+Tyr182) Rabbit Polyclonal Antibody	Human, Mouse, Rat	IF, IHC-Fr, IHC-P
orb378168	ERK5 Antibody	Human, Mouse, Rat	IF, IHC, WB
orb548642	Phospho-c-Jun (S63) Rabbit Monoclonal Antibody	Human, Mouse, Rat	ICC, IF, IHC, WB
orb216067	ATF2 (Phospho-T69) Antibody	Bovine, Gallus, Human, Mouse, Rat	IHC, IP, WB
orb216089	DUSP1 Antibody	Bovine, Gallus, Human, Mouse, Rat, Sheep	IHC, WB

Featured Validation Data

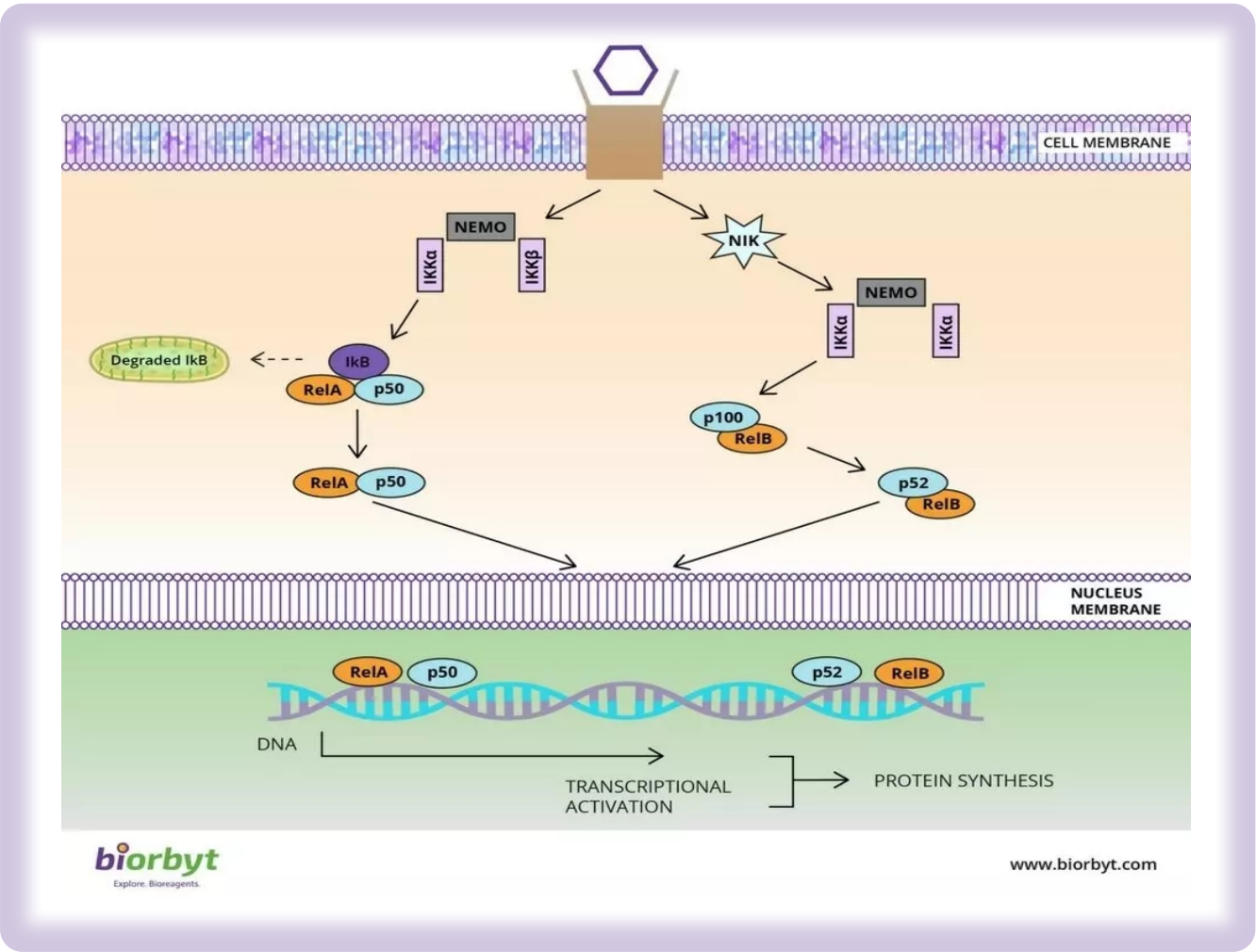


Explore Signaling Pathway Research Products at **biorbyt.com**
For Research Use Only

NF-κB Signaling Pathway

Research tools for inflammation, immune regulation and cell survival studies

- Nuclear factor kappa B (NF-κB) is a family of transcription factors that plays a central role in immune-system development, inflammatory responses, cell survival, differentiation and proliferation.
- NF-κB signaling is essential for maintaining immune, skeletal and epithelial homeostasis. Aberrant or persistent pathway activation has been associated with chronic inflammation, autoimmune disorders, cancer, neurodegenerative diseases and cardiovascular disease.



Hot Pathway Targets

RELA/p65 Phospho-p65 IκBα Phospho-IκBα IKKα IKKβ NFKB1/p50 NFKB2/p52 RelB c-Rel NIK TRAF6

Explore Signaling Pathway Research Products at www.biorbyt.com
For Research Use Only

NF-κB Signaling Pathway Products

Antibodies for canonical signaling, non-canonical activation and inflammatory-response studies

Biorbyt offers pathway-focused antibodies for studying NF-κB protein expression, phosphorylation, inhibitor degradation, nuclear translocation and downstream transcriptional responses.

Biorbyt Advantages

01 Broad NF-κB Pathway Coverage

Products targeting canonical and non-canonical signaling, including upstream adaptors, IKK-complex components, inhibitory proteins and NF-κB transcription factors.

02 Phospho-Specific Detection

Monitor pathway activation through key phosphorylation events, including NF-κB p65 Ser536 and IκBα Ser32/Ser36.

03 Application-Ready Reagents

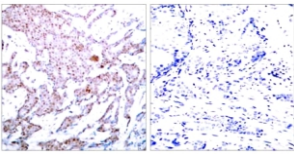
Select antibodies suitable for WB, IF, ICC, IHC, IHC-P, IP, FC, ELISA and gel supershift assays.

Biorbyt Featured Products

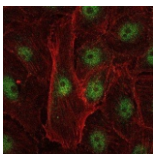
Catalogue No.	Name	Reactivity	Application
orb629611	RELA Antibody	Human, Mouse, Porcine, Rat	ELISA, FC, IF, IHC, IP, WB
orb14753	NFκB-p65 (Phospho-Ser536) Antibody	Human, Monkey, Mouse, Rat	ELISA, FC, IF, IHC, IP, WB
orb627966	NFKBIA Antibody	Human, Mouse, Porcine, Rat	IF, IHC-P, WB
orb1415373	IκB-α (Phospho-Ser32/Ser36) Polyclonal Antibody	Human, Mouse, Rat	IHC, WB
orb213742	IKK Alpha Antibody	Bovine, Human, Mouse, Porcine, Rat	ICC, IHC-P, WB
orb556271	IKK Beta Antibody	Human, Mouse, Rat	IHC, WB

Catalogue No.	Name	Reactivity	Application
orb750584	NFKB1 Antibody	Human	ELISA, Gel Supershift Assays, WB
orb750602	NFKB2 Antibody	Human	ELISA, WB
orb524842	RELB Antibody	Human, Mouse	ELISA, WB
orb69437	c-Rel Antibody	Human, Mouse	ICC, IHC, WB
orb1239370	MAP3K14/NIK Antibody	Human	ELISA, ICC, IF, WB
orb1474642	TRAF6 Antibody	Human, Mouse, Rat	IF, WB

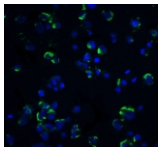
Featured Validation Data



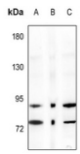
NFκB-p65 (Phospho-Ser536) Antibody
SKU: orb14753



c-Rel Antibody
SKU: orb69437



MAP3K14 Antibody
SKU: orb1239370



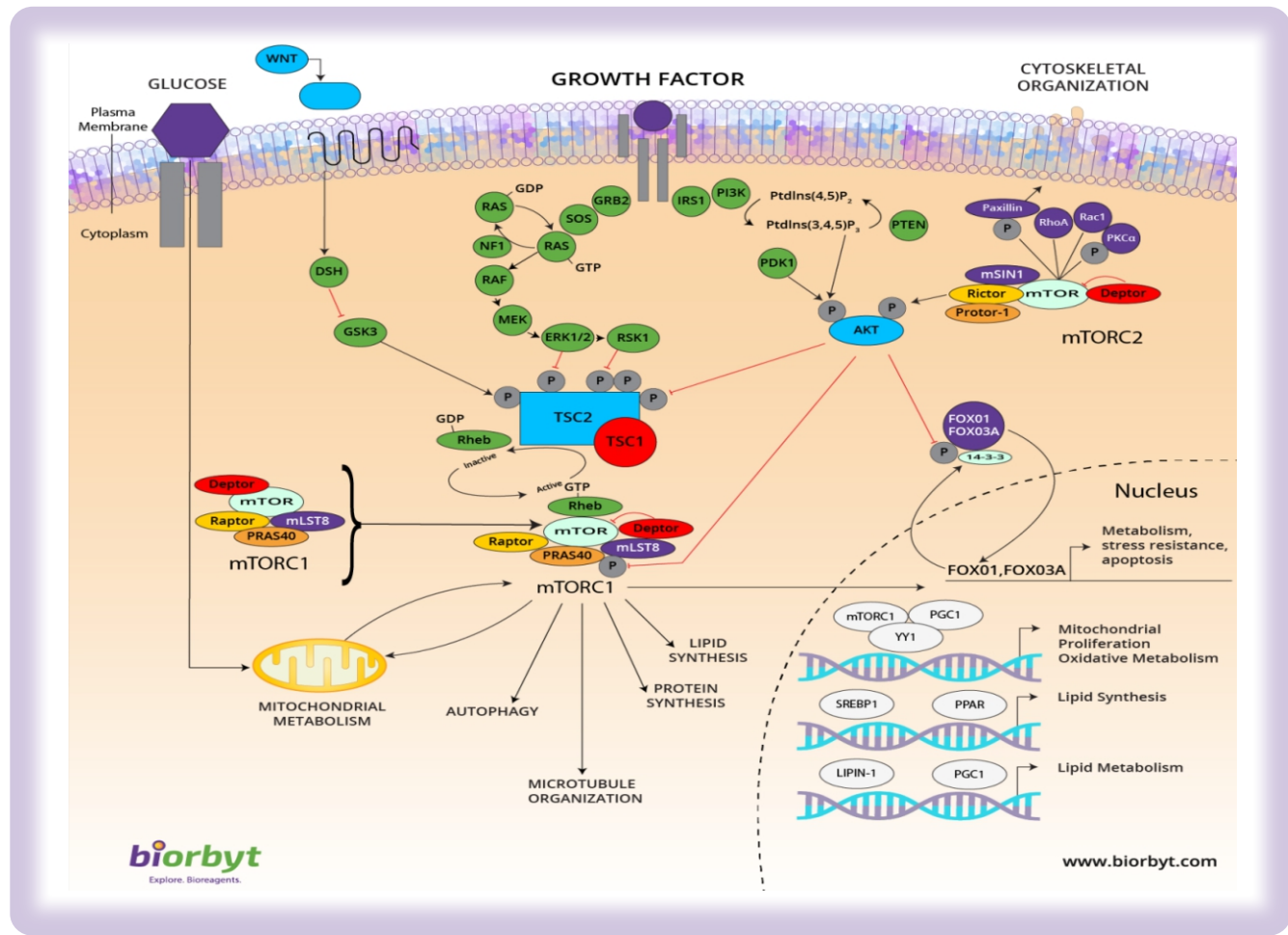
IKK alpha Rabbit Polyclonal Antibody
SKU: orb213742

Explore Signaling Pathway Research Products at www.biorbyt.com
For Research Use Only

mTOR Signaling Pathway

Research tools for cell growth, metabolism, protein synthesis and autophagy studies

- The mechanistic target of rapamycin (mTOR) is a serine/threonine kinase that integrates signals from growth factors, nutrients, cellular energy and stress to coordinate cell growth and metabolism.
- mTOR functions as the catalytic component of two distinct signaling complexes: TOR complex 1 (mTORC1) and mTOR complex 2 (mTORC2). Together, these complexes regulate protein synthesis, autophagy, metabolism, cell survival and cytoskeletal organisation.
- Dysregulated mTOR signaling is associated with cancer, insulin resistance, type 2 diabetes and other metabolic disorders. The pathway also contributes to angiogenesis, adipogenesis and T-cell activation.



Hot Pathway Targets

- mTOR

Phospho-mTOR

Raptor

RICTOR

TSC1

TSC2

Rheb

p-Akt(Ser473)

p-p70S6K(Thr389)

p-RPS6(Ser235/236)

4E-BP1

AMPK

LAMTOR1

DEPTOR

Explore Signaling Pathway Research Products at biobyte.com
For Research Use Only

mTOR Signaling Pathway Products

Research reagents for mTORC1, mTORC2, pathway activation and metabolic regulation

Biorbyt offers antibodies, phospho-specific antibodies, ELISA kits, recombinant proteins and small-molecule modulators for studying mTOR-complex composition, upstream regulation and downstream signaling.

Biorbyt Advantages

01 Broad mTOR Pathway Coverage

Products covering upstream regulators, mTORC1 and mTORC2 components, phospho-specific activation markers and downstream effectors.

02 Multiple Activation Readouts

Monitor signaling through mTOR Ser2448, Akt Ser473, p70S6K Thr389, RPS6 Ser235/236 and 4E-BP1 phosphorylation.

03 Multiple Product Formats

Select from primary antibodies, phospho-specific antibodies, small molecules, sandwich ELISA kits and recombinant proteins.

Featured mTOR Pathway Antibodies

Catalogue No.	Product Name	Tested Reactivity	Tested Applications
orb13590	MTOR Rabbit Polyclonal Antibody	Human, Mouse, Rat	FC, ICC, IF, IHC-Fr, IHC-P, WB
orb6452	mTOR (Phospho-Ser2448) Antibody	Human, Mouse, Rat	FC, IF, IHC-Fr, IHC-P
orb6617	Phospho-p70 S6 Kinase(Thr389/Thr412) Polyclonal Antibody	Human, Mouse, Rat	ICC, IF, IHC-P, WB
orb6890	Phospho-RPS6 (Ser235/Ser236) Rabbit Polyclonal Antibody	Human, Mouse, Rat	IF, IHC-Fr, IHC-P, WB
orb767260	4E-BP1 (Phospho-Thr69) Antibody	Mouse, Rat	ELISA, IF, IHC, WB
orb11293	AKT Phospho-Ser473 Antibody	Human	WB
orb6836	Raptor Rabbit Polyclonal Antibody	Human	IF, IHC-Fr, IHC-P
orb69304	RICTOR Antibody	Human, Monkey, Mouse	FC, ICC, IHC, WB
orb2415	DEPTOR Rabbit Polyclonal Antibody	Mouse, Rat	IF, IHC-Fr, IHC-P

Featured mTOR ELISA Kit

Catalogue No.	Product Name	Sample Types	Detection Range	Sensitivity
orb563133	Human mTOR ELISA Kit	Serum, plasma, cell culture supernatant, cell or tissue lysate and other liquid samples	0.156–10 ng/mL	0.094 ng/mL

Featured Bioactive Small Molecules

Catalogue No.	Compound	Class / Function	Target	Purity
orb1308282	Rapamycin	Allosteric mTOR inhibitor	FKBP–mTOR signaling	98.73%
orb1301122	Torin 1	ATP-competitive inhibitor	mTOR, DNA-PK, PI3K	99.38%
orb1307145	MHY1485	Cell-permeable mTOR activator	mTOR, autophagy	Greater than 98%*
orb1307455	Everolimus	Rapamycin analogue / rapalog	FKBP–mTOR signaling	99.78%
orb2814034	Dactolisib Hydrochloride	Dual PI3K/mTOR inhibitor	Class I PI3K, mTORC1/2	—

Featured Recombinant Proteins

Catalogue No.	Product Name	Origin / Expression	Expression Region	Tag	Molecular Weight	Purity
orb1974316	Recombinant Human MTOR Protein, N-His	Human / E. coli	1–300 aa	N-terminal His	36.1 kDa	Greater than 90%
orb705278	Human MTOR Protein	Human / E. coli	2012–2144 aa	N-terminal 10×His and C-terminal Myc	23.2 kDa	Greater than 85%
orb358894	Human LAMTOR1 Protein	Human / E. coli	2–161 aa	N-terminal 6×His	21.6 kDa	Greater than 90%

Featured Validation Data

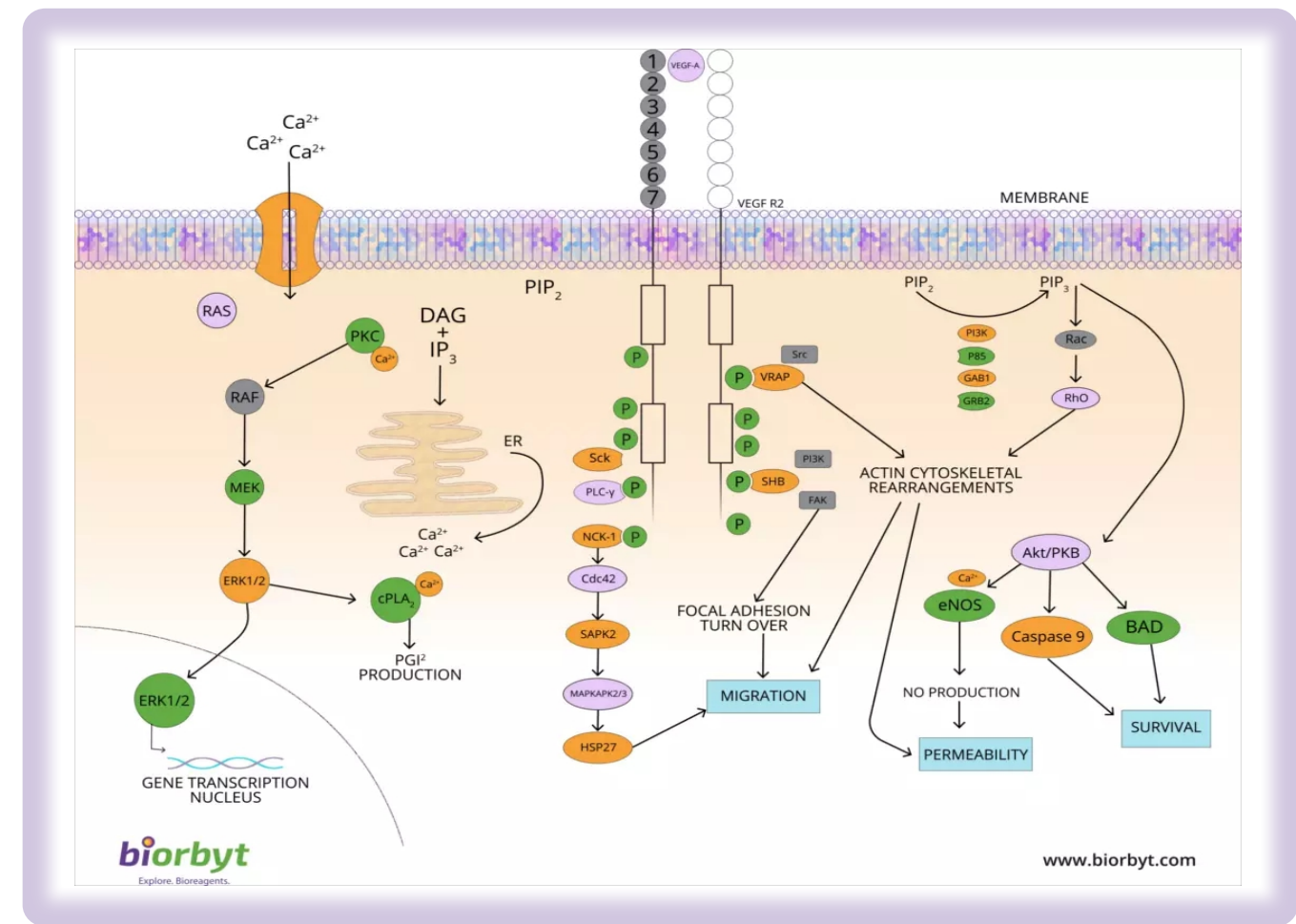


Explore Signaling Pathway Research Products at biobyte.com
For Research Use Only

VEGF Signaling Pathway

Research tools for angiogenesis, vascular biology and tumor microenvironment studies

- Vascular endothelial growth factors (VEGFs) are key regulators of blood and lymphatic vessel development, maintenance and function. VEGF expression is induced in multiple cell types, including fibroblasts, inflammatory cells and tumor cells, and is frequently increased under hypoxic conditions through HIF-1 α -dependent signaling.
- The VEGF family consists of VEGFA, VEGFB, VEGFC, VEGFD and placental growth factor—or PIGF. Among these factors, VEGFA is the most extensively studied. VEGFR2 is the principal signaling receptor mediating VEGFA-dependent endothelial-cell proliferation, migration, survival and vascular permeability.



Hot Pathway Targets

HIF-1 α VEGFA VEGFR1 VEGFR2 VEGFR3 PLC γ PKC ERK1/2 PI3K Akt Src FAK p38 MAPK HSP27

Explore Signaling Pathway Research Products at [biorbyt.com](http://www.biorbyt.com)
For Research Use Only

VEGF Signaling Pathway Products

Research reagents for angiogenesis, endothelial signaling and vascular-response studies

Biorbyt offers antibodies, phospho-specific antibodies, ELISA kits and recombinant proteins for studying VEGF production, VEGFR activation and downstream endothelial signaling.

Biorbyt Advantages

01 Broad VEGF Pathway Coverage

Products covering VEGF ligands, VEGF receptors, receptor phosphorylation, downstream kinases and endothelial-response proteins.

02 Multiple Product Formats

Choose from primary antibodies, phospho-specific antibodies, sandwich ELISA kits, recombinant proteins and biologically active VEGF proteins.

03 Application-Ready Research Tools

Products suitable for WB, IF, ICC, IHC, IHC-P, IHC-Fr, FC, ELISA and protein-based research workflows.

VEGF Pathway Antibodies

Catalogue No.	Product Name	Tested Reactivity	Tested Applications
orb191500	VEGF Rabbit Polyclonal Antibody	Bovine, Canine, Gallus, Guinea pig, Human, Mouse, Porcine, Rat, Sheep	ELISA, ICC, IF, IHC-P, WB
orb11557	VEGFR2 Rabbit Polyclonal Antibody	Canine, Human, Mouse, Porcine, Rat	ELISA, ICC, IF, IHC-P, WB
orb633034	Phospho-VEGF Receptor 2 (Y1175) Antibody	Human, Mouse, Rat	ELISA, IHC, WB
orb99143	Phospho-VEGF Receptor 2 (Tyr1059) Rabbit Polyclonal Antibody	Human	FC, IF, IHC-Fr, IHC-P, WB
orb10845	HSP27 Rabbit Polyclonal Antibody	Human, Rat	FC, IF, IHC-Fr, IHC-P, WB

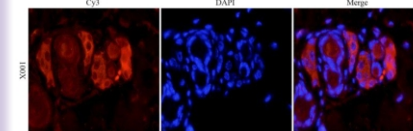
VEGF Recombinant Proteins

Catalogue No.	Product Name	Biological Origin / Expression	Tag	Molecular Weight	Purity
orb1817182	Recombinant Human VEGF-165 Protein, Active	Human / HEK293 cells	Tag-free	39–45 kDa	Greater than 95% by SDS-PAGE
orb244321	Human VEGFR2 Protein	Human / E. coli	N-terminal GST tag	110.3 kDa	Greater than 90% by SDS-PAGE

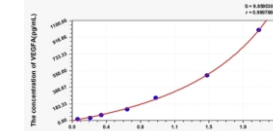
VEGF Pathway ELISA Kits

Catalogue No.	Product Name	Sample Types	Detection Range	Sensitivity
orb774994	Human Vascular Endothelial Growth Factor A (VEGFA) ELISA Kit	Serum, plasma, tissue homogenates, cell lysates, cell culture supernatants and other biological fluids	15.63–1000 pg/mL	6.4 pg/mL
orb775762	Human Vascular Endothelial Growth Factor Receptor 2 (VEGFR2) ELISA Kit	Serum, plasma, tissue homogenates and other biological fluids	0.63–40 ng/mL	0.227 ng/mL
orb781898	Pig Vascular Endothelial Growth Factor Receptor 2 (VEGFR2) ELISA Kit	Serum, plasma and other biological fluids	1.57–100 ng/mL	0.6 ng/mL
orb561761	Human HSP27 ELISA Kit	Serum, plasma, cell culture supernatant, cell or tissue lysate and other liquid samples	0.781–50 ng/mL	0.469 ng/mL

Featured Validation Data



VEGF Rabbit Polyclonal Antibody
SKU: orb191500



Human Vascular Endothelial Growth Factor A (VEGFA) ELISA Kit
SKU: orb774994



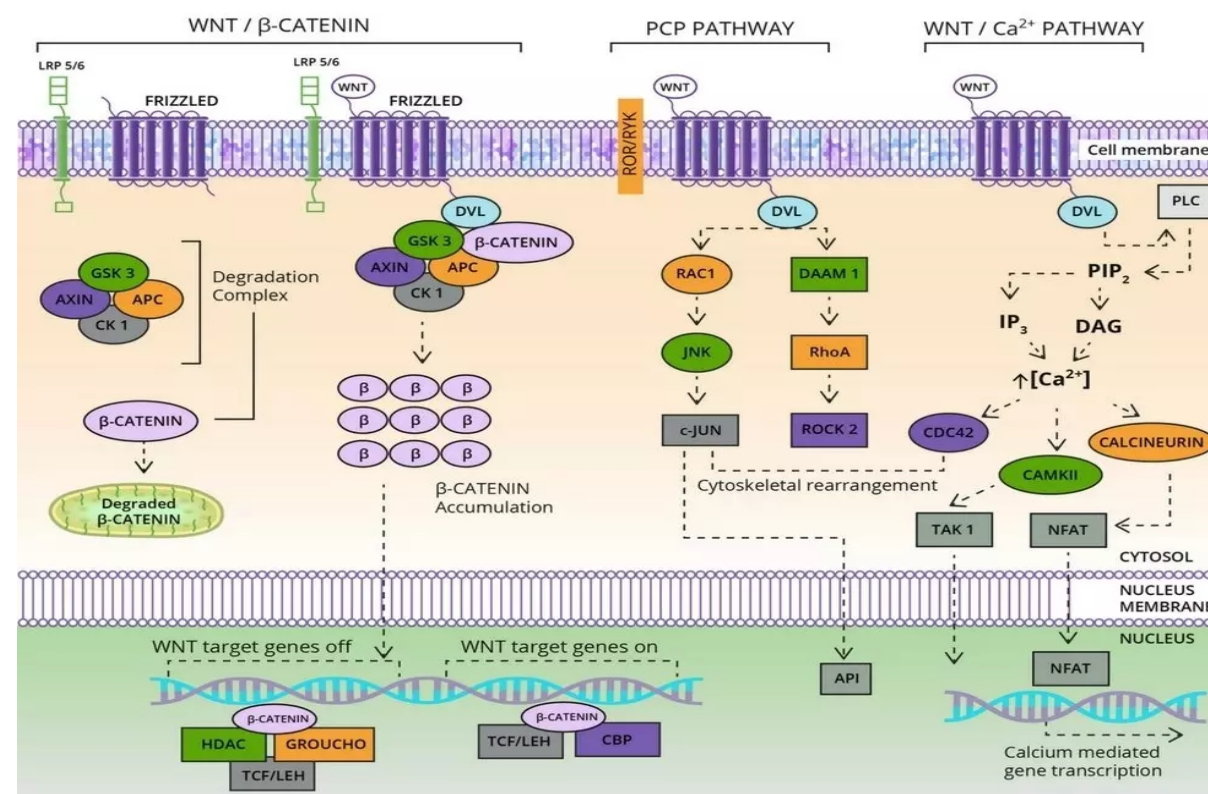
Recombinant human VEGF-165 protein (Active, HEK293)
SKU: orb1817182

Explore Signaling Pathway Research Products at [biorbyt.com](http://www.biorbyt.com)
For Research Use Only

Wnt Signaling Pathway

Research tools for stem cell biology, tissue homeostasis and cell fate regulation

- Wnt proteins are a family of secreted signaling molecules that regulate embryonic development, tissue homeostasis and regeneration. Wnt signaling plays fundamental roles in cell proliferation, polarity, migration, differentiation and cell fate determination.
- Dysregulation of Wnt signaling has been associated with cancer, metabolic disease, developmental abnormalities and inherited disorders. Three major Wnt signaling branches have been extensively studied: the canonical Wnt/ β -catenin pathway, the planar cell polarity pathway and the Wnt/ Ca^{2+} pathway.



Hot Pathway Targets

WNT3A WNT5A FZD LRP5/6 DVL AXIN1 APC GSK3 β β -Catenin TCF/LEF DKK1 ROR2

Wnt Signaling Pathway Products

Research reagents for canonical signaling, non-canonical pathways and Wnt-regulated cell responses

Biorbyt offers antibodies, phospho-specific antibodies, ELISA kits, recombinant proteins and pathway modulators for studying Wnt ligand activity, receptor activation, β -catenin regulation and downstream transcriptional responses.

Biorbyt Advantages

01 Broad Wnt Pathway Coverage

Products covering canonical Wnt/ β -catenin signaling, non-canonical pathways, extracellular ligands, membrane receptors and intracellular regulators.

02 Total and Phospho-Specific Detection

Study protein expression alongside pathway activation markers such as phosphorylated LRP6, GSK3 β and β -catenin.

03 Multiple Product Formats

Select from primary antibodies, ELISA kits, active proteins, recombinant receptor proteins and small-molecule pathway modulators.

Featured Wnt Pathway Antibodies

Catalogue No.	Product Name	Tested Reactivity	Tested Applications
orb213800	Beta-catenin Rabbit Polyclonal Antibody	Bovine, Human, Mouse, Porcine, Rat, Zebrafish	IF, IHC, WB
orb6330	Phospho-LRP6 Rabbit Polyclonal Antibody	Human, Rat	FC, IF, IHC-Fr, IHC-P
orb214762	Frizzled 5 Antibody	Human, Mouse, Rat	IF, IHC, WB
orb626559	DVL2 Antibody	Human, Mouse	ELISA, IF, IP, WB
orb10755	Phospho-GSK3 Beta (Ser9) Antibody	Human, Mouse, Rat	FC, ICC, IF, IHC-Fr, IHC-P, WB
orb69148	WNT5A Antibody	Human	ICC, IHC

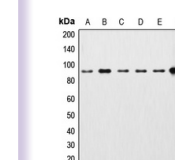
Featured Wnt Recombinant Proteins

Catalogue No.	Product Name	Origin / Expression System	Tag	Molecular Weight	Purity / Activity
orb2657896	Recombinant Human WNT3A Protein, Active	Human / Mammalian cells	C-terminal hFc	58.2 kDa	$\geq 95\%$
orb2328311	Recombinant Human DKK1 Protein, Active	Human / HEK293 cells	C-terminal His	Approximately 35–50 kDa due to glycosylation	$\geq 95\%$
orb2961546	Recombinant Human LRP6 Protein, N-His	Human / E. coli	N-terminal His	154.39 kDa	$\geq 90\%$

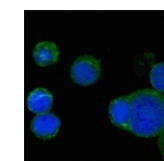
Featured Wnt Pathway ELISA Kits

Catalogue No.	Product Name	Sample Types	Detection Range	Sensitivity
orb562784	Human WNT3 ELISA Kit	Serum, plasma, cell culture supernatant, cell or tissue lysate and other liquid samples	0.156–10 ng/mL	0.094 ng/mL
orb2568370	Human WNT5A Quick ELISA Kit	Serum, plasma, cell culture supernatant, cell lysate, tissue lysate and other biological fluids	0.156–10 ng/mL	0.094 ng/mL
orb1666942	Human Catenin Beta 1 (CTNNB1) ELISA Kit	Serum, plasma and other biological fluids	15.6–1000 pg/mL	6.4 pg/mL
orb390891	Human DKK1 ELISA Kit	Cell culture supernatants, serum and plasma	62.5–4000 pg/mL	10 pg/mL

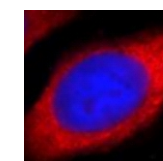
Featured Validation Data



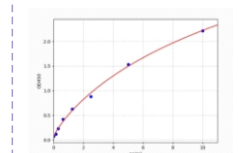
Beta-catenin Rabbit Polyclonal Antibody
SKU: orb213800



WNT5A Antibody
SKU: orb69148



DVL2 Rabbit Polyclonal Antibody
SKU: orb626559

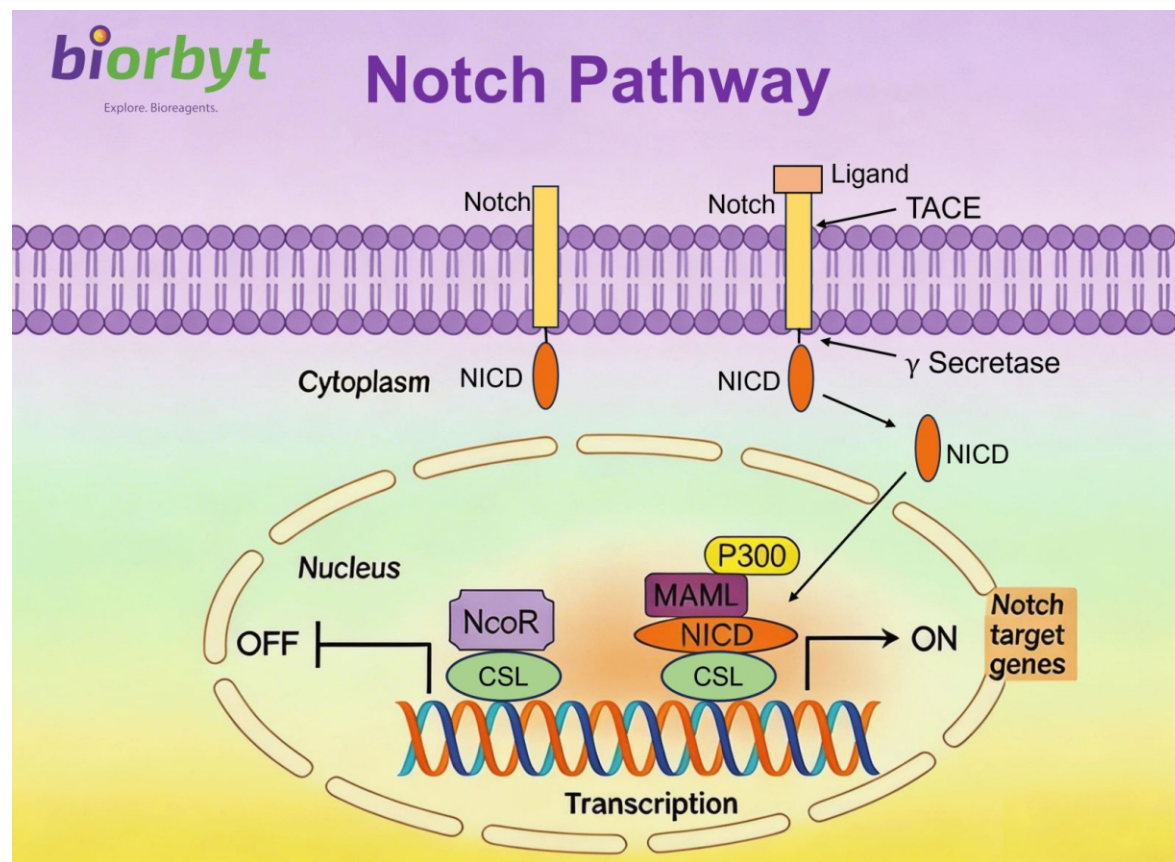


Human WNT3 ELISA Kit
SKU: orb562784

Notch Signaling Pathway

Research tools for cell fate determination, differentiation, stem cell biology and cancer research

- The Notch signaling pathway is an evolutionarily conserved cell–cell communication system that plays a fundamental role in controlling cell fate, proliferation, differentiation and apoptosis during development and in adult tissues.
- Unlike signaling pathways driven by soluble ligands, Notch signaling is activated through direct contact between neighbouring cells. Membrane-bound Notch receptors interact with Jagged or Delta-like ligands on an adjacent cell, initiating a series of proteolytic cleavage events that ultimately release the Notch intracellular domain—or NICD. NICD then enters the nucleus and activates Notch-responsive transcriptional programs.



Hot Pathway Targets

NOTCH1 NOTCH2 NOTCH3 NOTCH4 NICD JAG1 JAG2 DLL1 DLL3 DLL4 Presenilin 1 RBPJ MAML HES1 HEY1

Explore Signaling Pathway Research Products at [biorbyt.com](http://www.biorbyt.com)
For Research Use Only

Notch Signaling Pathway Products

Research reagents for receptor activation, ligand signaling, NICD generation and downstream transcription

Biorbyt offers antibodies, activation-specific antibodies, ELISA kits, recombinant proteins, over-expression lysates and bioactive small molecules for studying Notch ligand–receptor interactions, γ-secretase-dependent receptor cleavage and downstream HES/HEY transcriptional responses.

Biorbyt Advantages

01 Broad Notch Pathway Coverage

Products covering Notch receptors, activated NICD, Jagged and DLL ligands, γ-secretase components and downstream transcriptional targets.

02 Activation-Specific Detection

Combine total NOTCH1 with Cleaved-NOTCH1 V1754 antibodies to distinguish receptor expression from pathway activation.

03 Multiple Product Formats

Choose from primary antibodies, activation-specific antibodies, quantitative ELISA kits, recombinant proteins, pathway inhibitors and over-expression controls.

Featured Notch Pathway Antibodies

Catalogue No.	Product Name	Tested Reactivity	Tested Applications
orb500788	Notch1 Rabbit Polyclonal Antibody	Human, Mouse, Rat	IF, IHC-Fr, IHC-P, WB
orb675227	Cleaved-NOTCH1 (V1754) Antibody	Human, Mouse, Rat	ELISA, IHC, WB
orb1411370	Jagged1 Polyclonal Antibody	Human, Mouse, Rat	IF, IHC-P, WB
orb1805839	DLL4 Antibody	Human	ELISA, FA, FACS, In vivo
orb100523	HES1 Rabbit Polyclonal Antibody	Human, Mouse	FC, ICC, IF, IHC-Fr, IHC-P
orb11306	Presenilin 1 Rabbit Polyclonal Antibody	Human, Mouse, Rat	FC, ICC, IF, IHC-Fr, IHC-P, WB

Featured Notch ELISA Kits

Catalogue No.	Product Name	Sample Types	Detection Range	Sensitivity
orb1473439	Human NOTCH1 ELISA Kit	Cell culture supernatants, serum, plasma	62.5–4000 pg/mL	30 pg/mL
orb562308	Human NOTCH1 ELISA Kit	Serum, plasma, cell culture supernatant, cell/tissue lysate and other liquid samples	78–5000 pg/mL	46.9 pg/mL
orb777379	Human Delta Like Protein 4 (DLL4) ELISA Kit	Tissue homogenates, cell lysates and other biological fluids	0.16–10 ng/mL	0.056 ng/mL

Featured Notch Recombinant Proteins

Catalogue No.	Product Name	Expression System	Expression Region	Tag	Molecular Weight	Purity
orb1231490	NOTCH1 Recombinant Protein	HEK293 cells	Ala19–Gln526	C-terminal Fc	80.0 kDa	>95% by SDS-PAGE
orb2963452	Recombinant Human DLL4 Protein, C-Fc-His-Avi	Mammalian cells	Met1–Trp529	C-Fc-His-Avi	92.04 kDa	>90% by SDS-PAGE
orb1808121	Recombinant Human CD339/Jagged1 Protein, N-His	E. coli	34–220 aa	N-terminal His	33.1 kDa	>90% by SDS-PAGE

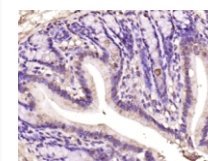
Featured Bioactive Small Molecules γ-Secretase Inhibitors

Catalogue No.	Compound	Class	Target	Purity
orb1225711	DAPT	γ-Secretase Inhibitor	Gamma-secretase	>98% by HPLC
orb1694781	γ-Secretase-IN-1 / Compound E	γ-Secretase Inhibitor	Gamma-secretase / β-Amyloid	99.56%*

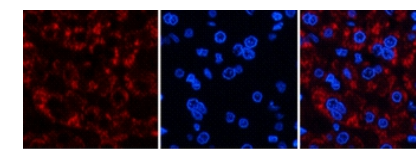
Featured NOTCH1 Over-expression Lysate

Catalogue No.	Product Name	Expression System	Tag	Molecular Weight
orb1377070	NOTCH1 Human Over-expression Lysate	HEK293T	C-Myc/DDK	272.58 kDa

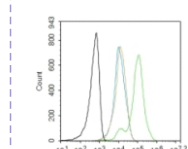
Featured Validation Data



Notch1 Rabbit Polyclonal Antibody
SKU: orb500788



Jagged1 Polyclonal Antibody
SKU: orb1411370



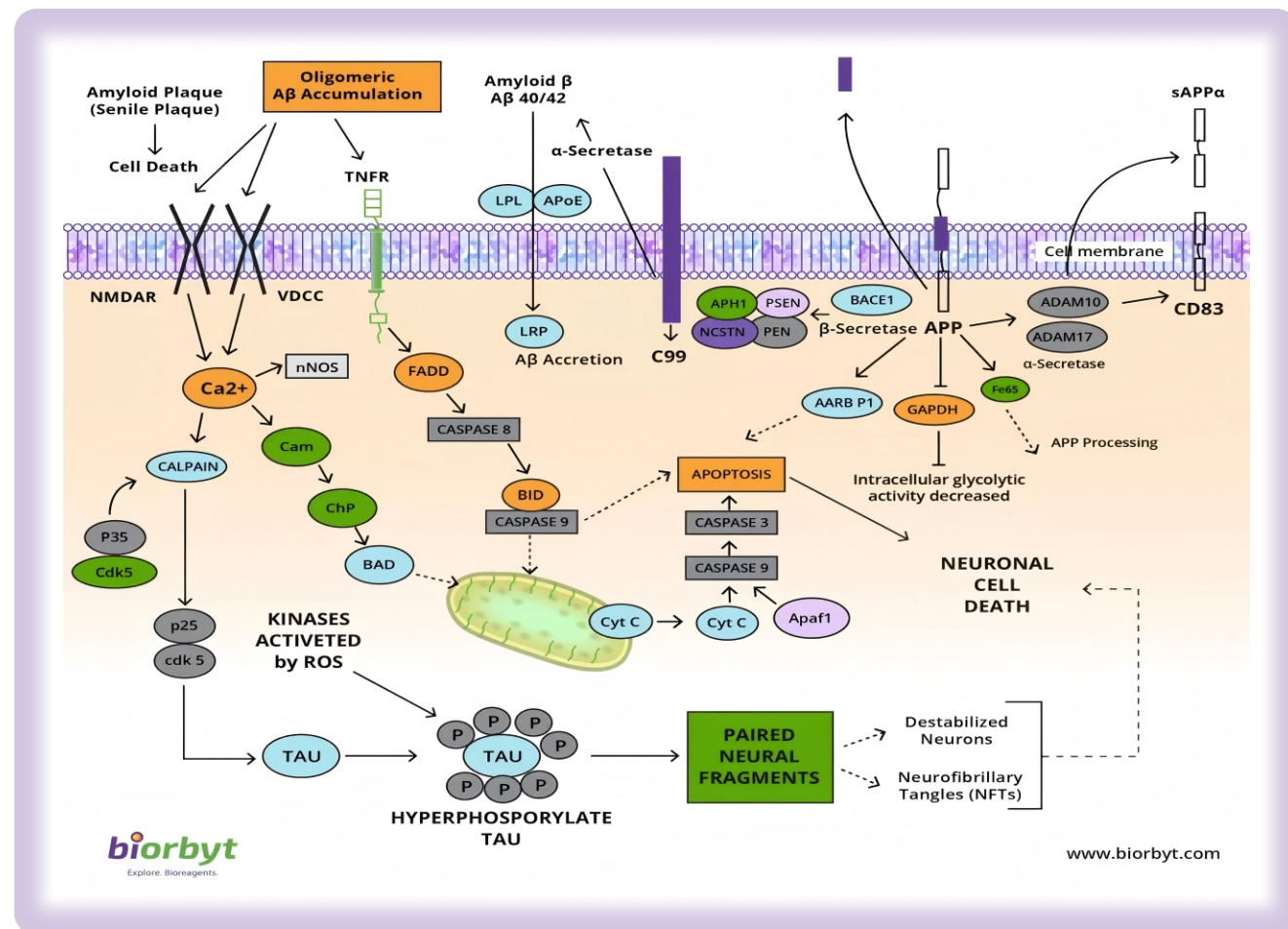
HES1 Rabbit Polyclonal Antibody
SKU: orb100523

Explore Signaling Pathway Research Products at [biorbyt.com](http://www.biorbyt.com)
For Research Use Only

Alzheimer's Disease Signaling Pathway

Research tools for amyloid processing, Tau pathology, neuroinflammation and neuronal cell-death studies

- Alzheimer's disease (AD) is a progressive neurodegenerative disorder characterised by extracellular amyloid plaques, intracellular neurofibrillary tangles, synaptic dysfunction and neuronal cell death.
- Abnormal processing of amyloid precursor protein (APP) promotes the production and aggregation of amyloid- β peptides. At the same time, abnormal phosphorylation and aggregation of Tau disrupt microtubule stability and neuronal transport. These interconnected pathological processes contribute to progressive memory loss and cognitive decline.



Hot Pathway Targets

APP A β 40 A β 42 ADAM10 BACE1 PSEN1 PSEN2 Tau Phospho-Tau GSK3 β CDK5 APOE4 TREM2 Cleaved Caspase-3

Explore Signaling Pathway Research Products at [biorbyt.com](https://www.biorbyt.com)
For Research Use Only

Alzheimer's Disease Research Products

Reagents for amyloid processing, Tau pathology and neurodegenerative-disease research

Biorbyt offers antibodies, phospho-specific antibodies, ELISA kits and recombinant proteins for studying APP processing, amyloid- β accumulation, Tau phosphorylation, neuroinflammation and neuronal cell-death mechanisms.

Biorbyt Advantages

01 Broad Alzheimer's Research Coverage

Products covering APP-processing enzymes, amyloid- β targets, total and phosphorylated Tau, Tau-regulatory kinases and neuroimmune markers.

02 Multiple Pathological Readouts

Study amyloid plaques, APP cleavage, Tau phosphorylation, protein localisation, biomarker concentration and neuronal apoptosis.

03 Multiple Product Formats

Choose from primary antibodies, phospho-specific antibodies, high-sensitivity ELISA kits and recombinant proteins.

Featured Alzheimer's Disease Antibodies

Catalogue No.	Product Name	Tested Reactivity	Tested Applications
orb10087	BetaAmyloid 1-42 Rabbit Polyclonal Antibody	Human	IHC-Fr, IHC-P, WB
orb1239089	APP Antibody	Human, Mouse, Rat	ELISA, IHC-P, WB
orb1239248	BACE1 Antibody	Human, Mouse	ELISA, ICC, IF, IHC-P, WB
orb14824	Tau Phospho-Ser396 Antibody	Human, Mouse, Rat	IHC, WB
orb631728	TAU Antibody	Human, Mouse, Rat	ELISA, IHC, WB
orb547091	Presenilin 1 Rabbit Monoclonal Antibody	Human, Mouse, Rat	FC, WB
orb10754	GSK-3 Beta Rabbit Polyclonal Antibody	Human, Mouse, Rat	FC, ICC, IF, IHC-Fr, IHC-P
orb1261444	TREM2 Antibody	Human, Mouse, Rat	IF, IHC, WB
orb1255477	ADAM10 Antibody	Human, Mouse, Rat	IF, WB
orb2957300	APOE4 Mouse Monoclonal Antibody	Human	ELISA, Functional Studies
orb675216	Cleaved-CASP3 Asp175Antibody	Human, Mouse, Rat	ELISA, IHC, WB

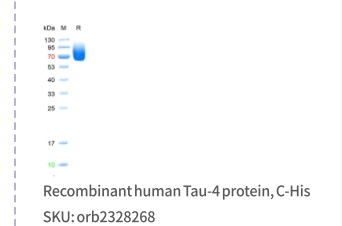
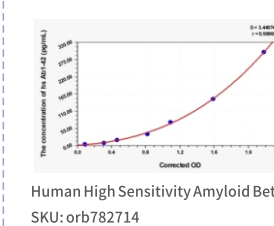
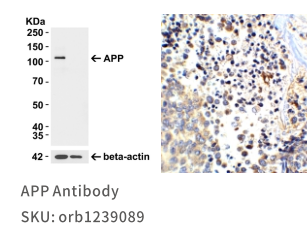
Featured Alzheimer's Disease ELISA Kits

Catalogue No.	Product Name	Sample Types	Detection Range	Sensitivity
orb782714	Human High-Sensitivity Amyloid Beta Peptide 1-42 ELISAKit	Serum, plasma and other biological fluids	4.69–300 pg/mL	1.34 pg/mL
orb2817078	Human Tau Proteins ELISAKit	Serum, plasma and other biological fluids	15.63–1000 pg/mL	5.4 pg/mL
orb564887	Human Phospho-Tau P181 ELISAKit	Serum, plasma, cell-culture supernatant, cell or tissue lysate and other liquid samples	7.813–500 pg/mL	4.688 pg/mL

Featured Alzheimer's Recombinant Proteins

Catalogue No.	Product Name	Expression System	Tag	Molecular Weight	Purity / Activity
orb753882	Human Beta Amyloid 1-42 Protein	E. coli	N-terminal His-IF2DI	25 kDa	Greater than 95%
orb2328268	Recombinant human Tau-4 protein	HEK293 cells	C-terminal His	48 kDa	Greater than 90%
orb1228176	BACE1 Recombinant Protein	HEK293 cells	His tag	49.2 kDa	Greater than 95%; specific activity greater than 3.5 pmol/min/ μ g

Featured Validation Data

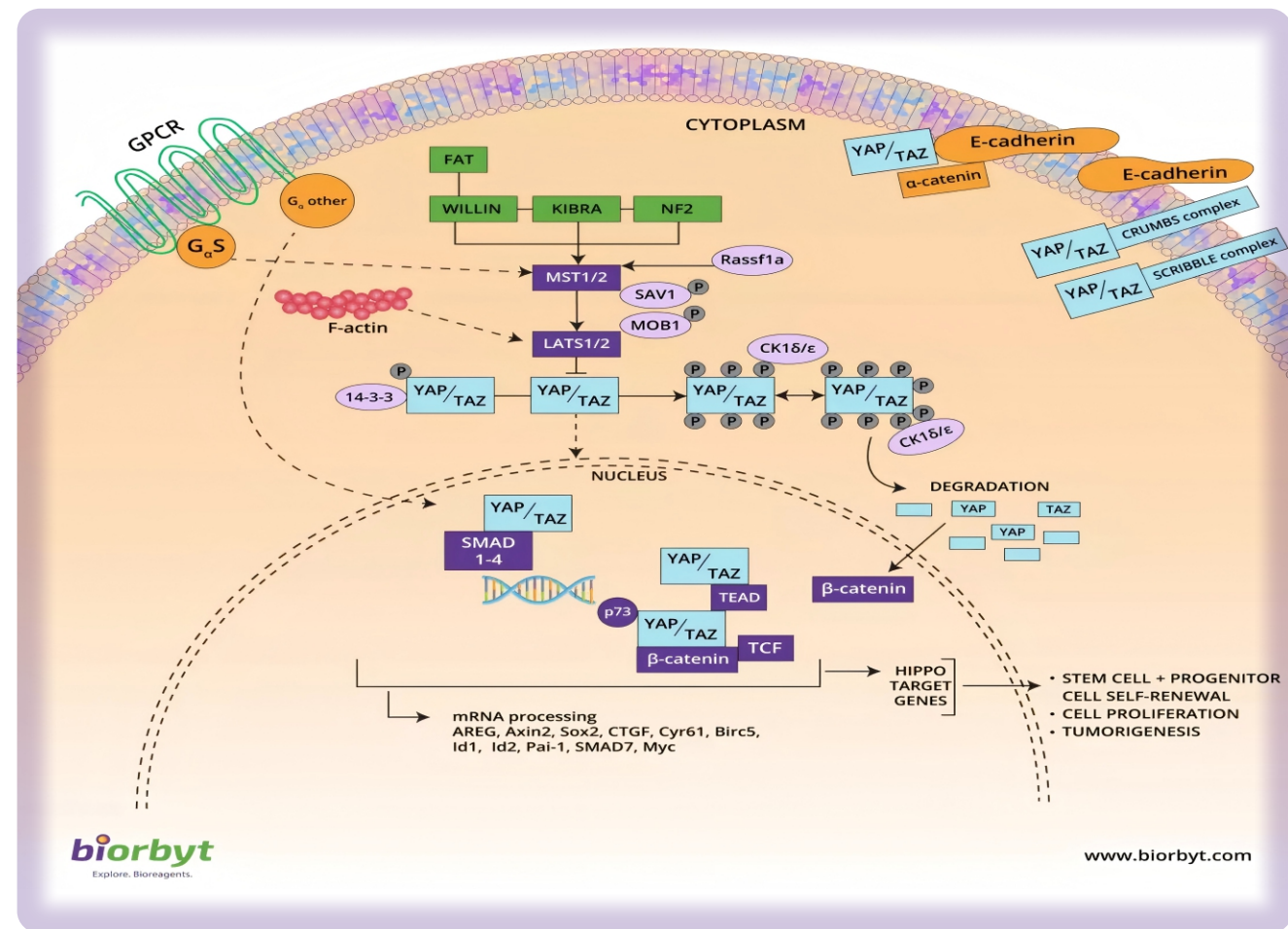


Explore Signaling Pathway Research Products at [biorbyt.com](https://www.biorbyt.com)
For Research Use Only

Hippo Signaling Pathway

Research tools for tissue growth, mechanotransduction, YAP/TAZ regulation and cancer biology

- The Hippo signaling pathway is an evolutionarily conserved signaling network originally identified through studies of tissue-growth control in *Drosophila melanogaster*. In mammals, the pathway plays a central role in restricting tissue overgrowth and regulating cell proliferation, differentiation, migration and survival.
- Unlike many classical signaling pathways, Hippo signaling does not rely on a single dedicated extracellular ligand–receptor pair. Instead, it integrates diverse upstream signals, including cell–cell contact, cell polarity, GPCR signaling and mechanical cues, to regulate the activity and subcellular localization of the transcriptional co-activators YAP and TAZ/WWTR1. Dysregulation of this pathway can promote uncontrolled cell growth and neoplasia.



Hot Pathway Targets

NF2/Merlin KIBRA/WWC1 MST1/STK4 MST2/STK3 SAV1 MOB1A LATS1 LATS2 YAP1 Phospho-YAP1 Ser127 TAZ/WWTR1 TEAD CTGF/CCN2

Explore Signaling Pathway Research Products at **bi**orbyt.com
For Research Use Only

Hippo Signaling Pathway Products

Research reagents for core kinase signaling, YAP/TAZ activation and mechanotransduction studies

Biorbyt offers total and phospho-specific antibodies, ELISA kits and recombinant proteins for studying upstream Hippo regulators, the MST–LATS kinase cascade and downstream YAP/TAZ-dependent signaling.

Biorbyt Advantages

01 Broad Hippo Pathway Coverage

Products spanning upstream regulators, MST/LATS kinase components, adaptor proteins, YAP/TAZ effectors and downstream pathway readouts.

02 Total and Phospho-Specific Detection

Analyse both protein abundance and activation state using total YAP1, phospho-YAP1 Ser127, total LATS1 and phospho-LATS1/2 reagents.

03 Multiple Product Formats

Choose from primary antibodies, recombinant monoclonal phospho-specific antibodies, quantitative ELISA kits and recombinant proteins.

Featured Hippo Pathway Antibodies

Catalogue No.	Product Name	Tested Reactivity	Tested Applications
orb1274561	YAP1 Antibody — KO/KD Validated	Human, Mouse, Rat	IF, IHC, IP, WB
orb559171	Phospho-YAP1 (Ser127) Recombinant Rabbit Monoclonal Antibody	Human, Mouse, Rat	IF, IHC-Fr, IHC-P, WB
orb389325	WWTR1 Antibody	Human, Mouse, Rat	ICC, IF, IHC-P, WB
orb443195	LATS1 Antibody	Human, Mouse, Rat	ELISA, FC, ICC, IHC, IHC-Fr, WB
orb100648	Phospho-LATS1+LATS2 (Thr1079+Thr1041) Rabbit Polyclonal Antibody	Human, Mouse, Rabbit	ELISA, IF, IHC-Fr, IHC-P, WB
orb704393	STK4 Rabbit Polyclonal Antibody	Human, Mouse, Rat	ELISA, ICC, IP, WB
orb1256675	STK3 Antibody	Human, Mouse, Rat	IF, IHC, WB
orb628877	MOB1A Antibody	Human, Mouse, Rat	ELISA, IHC, IP, WB
orb1816723	SAV1 Rabbit Polyclonal Antibody	Human, Mouse	ELISA, WB
orb629259	NF2 Rabbit Polyclonal Antibody	Human, Mouse, Rat	ELISA, IF, IHC, IP, WB

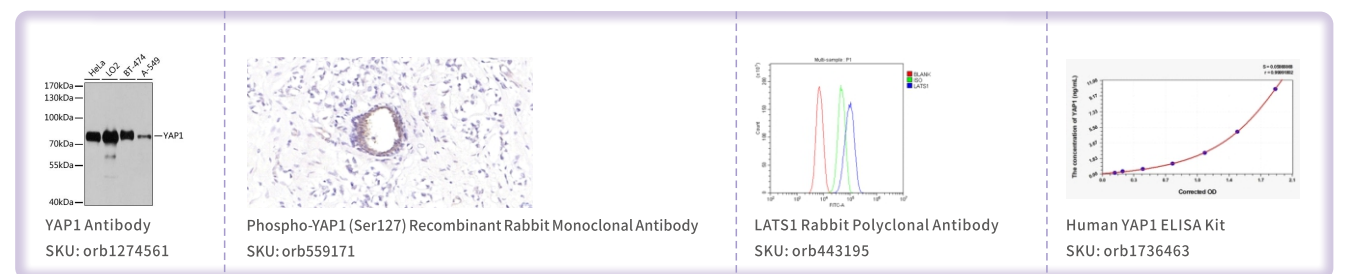
Featured Hippo Pathway ELISA Kits

Catalogue No.	Product Name	Sample Types	Detection Range	Sensitivity
orb1736463	Human Yes Associated Protein 1 (YAP1) ELISA Kit	Tissue homogenates, cell lysates and other biological fluids	0.16–10 ng/mL	0.072 ng/mL
orb1807594	Human Connective Tissue Growth Factor (CTGF) ELISA Kit	Serum, plasma, tissue homogenates and other biological samples	62.5–4000 pg/mL	25.2 pg/mL

Featured Hippo Recombinant Proteins

Catalogue No.	Product Name	Expression System	Expression Region	Tag	Molecular Weight
orb1173915	Human YAP1 Protein, His Tag	HEK293	Met1–Leu504, full length	C-terminal 6×His	55.3 kDa
orb2967353	Recombinant Human WWTR1 Protein, N-His	E. coli	Met1–Leu400	N-terminal 6×His	46.26 kDa
orb2995163	Human MOB1A Recombinant Protein	E. coli	Ser2–Arg216	C-terminal 6×His	Predicted 26 kDa; observed 29 kDa

Featured Validation Data



Explore Signaling Pathway Research Products at **bi**orbyt.com
For Research Use Only