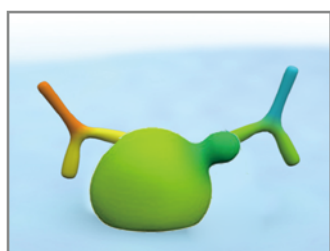


## Protein Phosphorylation Antibody Pair

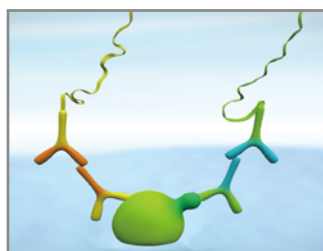


A powerful platform for protein phosphorylation and protein-protein interaction studies *in situ* is created by combining Abnova's dual recognition, primary antibody pair with Duolink® *in situ* proximity ligation assay (*in situ* PLA™) from Olink Bioscience. This revolutionary combination enables unprecedented specificity and sensitivity of protein detection and quantification for high performance immunofluorescence and immunohistochemistry applications. Leveraging on Abnova's manufacturing capability and growing collection of 30,000+ antibodies, and Olink Bioscience *in situ* PLA technology, hundreds of target specific and validated assays are being developed and marketed by both companies in cells and tissue samples.

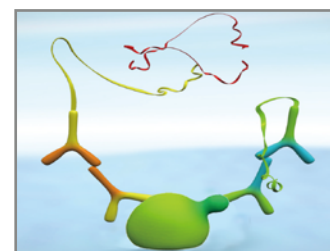
### Principle of *in situ* Proximity Ligation Assay



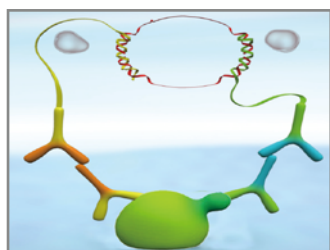
1. Incubate with target primary antibodies from two different species



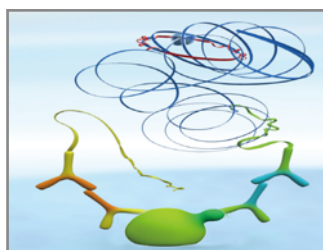
2. Add PLA probes PLUS and MINUS



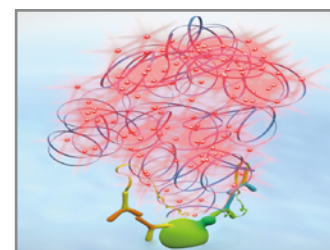
3. Hybridize connector oligos



4. Ligation to form a complete DNA circle



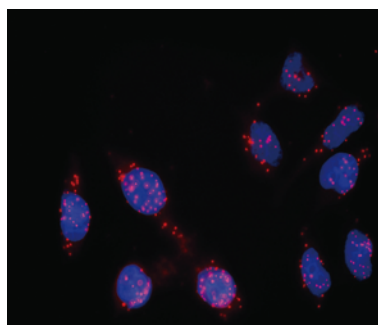
5. Rolling circle amplification



6. Add fluorescent probes to reveal phosphorylation

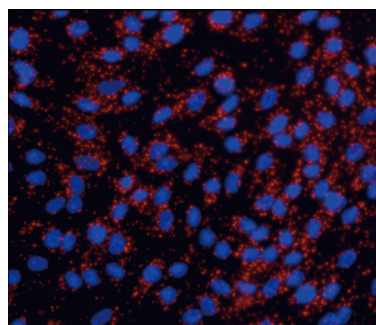
### Protein Phosphorylation Studies

Product Name: Phospho-DNMT1(Y399) & DNMT1 Dual Recognition Antibody Pair  
Catalog #: DP0002



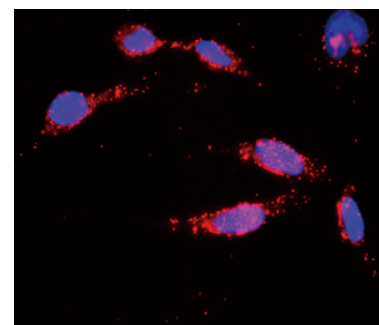
The phosphorylation of DNMT1 protein on Y399 in HeLa cell. Each red dot represents a phosphorylated protein.

Product Name: Phospho-PDGFRB(Y579) & PDGFRB Dual Recognition Antibody Pair  
Catalog #: DP0004



The phosphorylation of PDGFRB protein on Y579 in BJ hTert cell stimulated with PDGF-BB. Each red dot represents a phosphorylated protein.

Product Name: Phospho-RAF1(S259) & RAF1 Dual Recognition Antibody Pair  
Catalog #: DP0003



The phosphorylation of RAF1 protein on S259 in HeLa cell. Each red dot represents a phosphorylated protein.

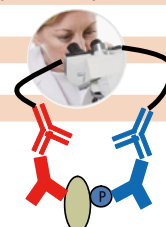
# Protein Phosphorylation Antibody Pair

Catalog #	Product Name
DP0197	ADD1(phospho S726) & ADD1 Protein Phosphorylation Antibody Pair
DP0114	AKT1(phospho S124) & AKT1 Protein Phosphorylation Antibody Pair
DP0154	AKT1(phospho S473) & AKT1 Protein Phosphorylation Antibody Pair
DP0246	AKT1(phospho T450) & AKT1 Protein Phosphorylation Antibody Pair
DP0056	APBB1(phospho S175) & APBB1 Protein Phosphorylation Antibody Pair
DP0199	APP(phospho T668) & APP Protein Phosphorylation Antibody Pair
DP0169	AR(phospho S213) & AR Protein Phosphorylation Antibody Pair
DP0137	ATF2(phospho S62/S44) & ATF2 Protein Phosphorylation Antibody Pair
DP0141	ATF2(phospho T71/T53) & ATF2 Protein Phosphorylation Antibody Pair
DP0142	ATF2(phospho T73/T55) & ATF2 Protein Phosphorylation Antibody Pair
DP0076	ATM(phospho S1981) & ATM Protein Phosphorylation Antibody Pair
DP0170	ATM(phospho S1981) & ATM Protein Phosphorylation Antibody Pair
DP0081	ATXN1(phospho T236) & ATXN1 Protein Phosphorylation Antibody Pair
DP0156	BAD(phospho S155) & BAD Protein Phosphorylation Antibody Pair
DP0094	BAD(phospho S99) & BAD Protein Phosphorylation Antibody Pair
DP0201	BCR(phospho Y177) & BCR Protein Phosphorylation Antibody Pair
DP0070	BRAF(phospho S601) & BRAF Protein Phosphorylation Antibody Pair
DP0064	BRAF(phospho T439) & BRAF Protein Phosphorylation Antibody Pair
DP0259	CBL(phospho Y700) & CBL Protein Phosphorylation Antibody Pair
DP0176	CDC2(phospho T161) & CDC2 Protein Phosphorylation Antibody Pair
DP0211	CDC2(phospho Y15) & CDC2 Protein Phosphorylation Antibody Pair
DP0075	CDK2(phospho T14) & CDK2 Protein Phosphorylation Antibody Pair
DP0042	CDK2(phospho T160) & CDK2 Protein Phosphorylation Antibody Pair
DP0222	CREB1(phospho S129) & CREB1 Protein Phosphorylation Antibody Pair
DP0017	DNMT1(phospho S714) & DNMT1 Protein Phosphorylation Antibody Pair
DP0002	DNMT1(phospho Y399) & DNMT1 Protein Phosphorylation Antibody Pair
DP0077	E2F1(phospho S364) & E2F1 Protein Phosphorylation Antibody Pair
DP0251	EIF2S1(phospho S49) & EIF2S1 Protein Phosphorylation Antibody Pair
DP0223	EIF2S1(phospho S51) & EIF2S1 Protein Phosphorylation Antibody Pair
DP0268	EIF4E(phospho S209) & EIF4E Protein Phosphorylation Antibody Pair
DP0252	EIF4G1(phospho S1232) & EIF4G1 Protein Phosphorylation Antibody Pair
DP0127	ELK1(phospho S383) & ELK1 Protein Phosphorylation Antibody Pair
DP0145	ELK1(phospho S389) & ELK1 Protein Phosphorylation Antibody Pair
DP0146	ELK1(phospho T417) & ELK1 Protein Phosphorylation Antibody Pair
DP0061	ERBB2(phospho Y1248) & ERBB2 Protein Phosphorylation Antibody Pair
DP0160	ERBB2(phospho Y877) & ERBB2 Protein Phosphorylation Antibody Pair
DP0250	ERBB3(phospho Y1328) & ERBB3 Protein Phosphorylation Antibody Pair
DP0067	ESPL1(phospho S1176) & ESPL1 Protein Phosphorylation Antibody Pair
DP0062	ESPL1(phospho S748) & ESPL1 Protein Phosphorylation Antibody Pair
DP0157	ESR1(phospho S118) & ESR1 Protein Phosphorylation Antibody Pair
DP0158	ESR1(phospho S167) & ESR1 Protein Phosphorylation Antibody Pair
DP0034	FGFR1(phospho Y154) & FGFR1 Protein Phosphorylation Antibody Pair
DP0025	FGFR1(phospho Y463) & FGFR1 Protein Phosphorylation Antibody Pair
DP0115	FGFR1(phospho Y766) & FGFR1 Protein Phosphorylation Antibody Pair
DP0120	FLNA(phospho S2522) & FLNA Protein Phosphorylation Antibody Pair
DP0229	GAB1(phospho Y627) & GAB1 Protein Phosphorylation Antibody Pair
DP0059	GAB1(phospho Y659) & GAB1 Protein Phosphorylation Antibody Pair
DP0122	GAB1(phospho Y659) & GAB1 Protein Phosphorylation Antibody Pair
DP0224	GAP43(phospho S41) & GAP43 Protein Phosphorylation Antibody Pair
DP0218	GRIA1(phospho S849) & GRIA1 Protein Phosphorylation Antibody Pair
DP0065	GSK3B(phospho S9) & GSK3B Protein Phosphorylation Antibody Pair
DP0233	GSK3B(phospho Y216) & GSK3B Protein Phosphorylation Antibody Pair
DP0110	H2AFX(phospho S139) & H2AFX Protein Phosphorylation Antibody Pair
DP0173	HDAC8(phospho S39) & HDAC8 Protein Phosphorylation Antibody Pair
DP0189	HSPB1(phospho S15) & HSPB1 Protein Phosphorylation Antibody Pair
DP0111	HSPB1(phospho S78) & HSPB1 Protein Phosphorylation Antibody Pair
DP0274	MAPK8(phospho T183) & MAPK8 Protein Phosphorylation Antibody Pair
DP0212	MAPK8(phospho Y204) & MAPK8 Protein Phosphorylation Antibody Pair
DP0097	MDM2(phospho S166) & MDM2 Protein Phosphorylation Antibody Pair
DP0073	MDM2(phospho T218) & MDM2 Protein Phosphorylation Antibody Pair

Catalog #	Product Name
DP0148	MEF2A(phospho T319) & MEF2A Protein Phosphorylation Antibody Pair
DP0267	MET(phospho Y1234) & MET Protein Phosphorylation Antibody Pair
DP0144	MYC(phospho T358) & MYC Protein Phosphorylation Antibody Pair
DP0021	NFKB1(phospho S337) & NFKB1 Protein Phosphorylation Antibody Pair
DP0134	NFKB1(phospho S337) & NFKB1 Protein Phosphorylation Antibody Pair
DP0023	NFKB1(phospho S893) & NFKB1 Protein Phosphorylation Antibody Pair
DP0136	NFKB1(phospho S907) & NFKB1 Protein Phosphorylation Antibody Pair
DP0036	NFKB1(phospho S932) & NFKB1 Protein Phosphorylation Antibody Pair
DP0213	NFKB1(phospho S932) & NFKB1 Protein Phosphorylation Antibody Pair
DP0237	NFKBIA(phospho S927) & NFKBIA Protein Phosphorylation Antibody Pair
DP0187	NFKBIB(phospho Y42) & NFKBIB Protein Phosphorylation Antibody Pair
DP0234	NOS3(phospho S23) & NOS3 Protein Phosphorylation Antibody Pair
DP0185	NTRK2(phospho S1177) & NTRK2 Protein Phosphorylation Antibody Pair
DP0058	PAK1(phospho T212) & PAK1 Protein Phosphorylation Antibody Pair
DP0053	PAK1(phospho T423) & PAK1 Protein Phosphorylation Antibody Pair
DP0010	PDGFRA(phospho Y1018) & PDGFRA Protein Phosphorylation Antibody Pair
DP0013	PDGFRA(phospho Y572) & PDGFRA Protein Phosphorylation Antibody Pair
DP0009	PDGFRA(phospho Y574) & PDGFRA Protein Phosphorylation Antibody Pair
DP0028	PDGFRA(phospho Y754) & PDGFRA Protein Phosphorylation Antibody Pair
DP0008	PDGFRA(phospho Y762) & PDGFRA Protein Phosphorylation Antibody Pair
DP0031	PDGFRA(phospho Y988) & PDGFRA Protein Phosphorylation Antibody Pair
DP0108	PDGFRB(phospho Y1009) & PDGFRB Protein Phosphorylation Antibody Pair
DP0006	PDGFRB(phospho Y1021) & PDGFRB Protein Phosphorylation Antibody Pair
DP0007	PDGFRB(phospho Y1021) & PDGFRB Protein Phosphorylation Antibody Pair
DP0004	PDGFRB(phospho Y579) & PDGFRB Protein Phosphorylation Antibody Pair
DP0105	PDGFRB(phospho Y716) & PDGFRB Protein Phosphorylation Antibody Pair
DP0005	PDGFRB(phospho Y740) & PDGFRB Protein Phosphorylation Antibody Pair
DP0106	PDGFRB(phospho Y771) & PDGFRB Protein Phosphorylation Antibody Pair
DP0107	PDGFRB(phospho Y857) & PDGFRB Protein Phosphorylation Antibody Pair
DP0279	PDPK1(phospho S410) & PDPK1 Protein Phosphorylation Antibody Pair
DP0128	PGR(phospho S241) & PGR Protein Phosphorylation Antibody Pair
DP0069	PIK3R1(phospho Y368) & PIK3R1 Protein Phosphorylation Antibody Pair
DP0159	PLCG1(phospho S190) & PLCG1 Protein Phosphorylation Antibody Pair
DP0166	PLCG1(phospho Y783) & PLCG1 Protein Phosphorylation Antibody Pair
DP0283	PRKCA(phospho T637) & PRKCA Protein Phosphorylation Antibody Pair
DP0231	PRKCD(phospho S645) & PRKCD Protein Phosphorylation Antibody Pair
DP0238	PRKCZ(phospho T410) & PRKCZ Protein Phosphorylation Antibody Pair
DP0271	PRKD3(phospho S910) & PRKD3 Protein Phosphorylation Antibody Pair
DP0071	PRKDC(phospho S2612) & PRKDC Protein Phosphorylation Antibody Pair
DP0072	PRKDC(phospho T2609) & PRKDC Protein Phosphorylation Antibody Pair
DP0191	PRKDC(phospho T2609) & PRKDC Protein Phosphorylation Antibody Pair
DP0054	PRL(phospho S163) & PRL Protein Phosphorylation Antibody Pair
DP0155	PTEN(phospho S370) & PTEN Protein Phosphorylation Antibody Pair
DP0232	PTK2(phospho Y397) & PTK2 Protein Phosphorylation Antibody Pair
DP0258	PTK2(phospho Y576/Y577) & PTK2 Protein Phosphorylation Antibody Pair
DP0206	PTK2B(phospho Y402) & PTK2B Protein Phosphorylation Antibody Pair
DP0265	PXN(phospho Y31) & PXN Protein Phosphorylation Antibody Pair
DP0019	RAF1(phospho S339) & RAF1 Protein Phosphorylation Antibody Pair
DP0133	RELA(phospho S468) & RELA Protein Phosphorylation Antibody Pair
DP0102	RELA(phospho T254) & RELA Protein Phosphorylation Antibody Pair
DP0132	RELA(phospho T435) & RELA Protein Phosphorylation Antibody Pair

To complete the Proximity Ligation Assay for above experiment, please order the following detection accessories.

Catalog #	Product Name
U0012	Mouse PLUS and Rabbit MINUS Complete <i>in situ</i> PLA™ Kit
90701	PLA probe 30 Mouse PLUS
90602	PLA probe 30 Rabbit MINUS
90133	Duolink 30 Detection Kit 613
80100	Duolink Mounting Medium, 10ml



For more product information

Visit [www.abnova.com](http://www.abnova.com) and search for: **protein phosphorylation**