Innovative CRO+Explorer
ICE Bioscience

Active-Validated Proteins for Drug Discovery

ICE Biochemistry (IBC) was established on February 18, 2019. Over the years, it has grown into a comprehensive biochemical platform encompassing six key areas: protein products and customization, biophysical analysis, enzymatic system construction and screening, biochemical mechanism research, mass spectrometry analysis, and high-throughput and panel screening. The team is highly experienced, with over 25 leaders averaging more than six years of industry experience. The platform boasts over 1200 enzymatic assays, 700 target protein products, and more than 50 validated SPR assays, supporting new drug development for domestic and international partners.

The ICE Bioscience Protein Science Platform offers integrated custom protein services, including cloning, expression, purification, quality control, and activity determination. We provide personalized services for different application scenarios with three major expression systems: E. coli, insect cells, and mammalian cells. Various protein tags are available, and we also offer tag removal, fluorescent labeling, and biotinylation services to meet different experimental needs. The ICE Bioscience Protein Science Platform can perform SDS-PAGE, HPLC, LC/MS, Western Blot, enzymatic activity assays, and biophysical analyses to ensure protein quality and activity.

Protein Activity Assay Techniques:

- HTRF_Binding
- FP_Binding
- AlphaLISA_Binding
- LCMS_Binding
- ELISA_Binding
- SPR
- NanoDSF
- TSA
- HTRF_Function
- TR_FRET_Function
- FP_Function
- AlphaLISA_Function
- LCMS_Function
- ELISA_Function
- FI_Function
- FRET_Function
- ADP-Glo_Function
- Abs_Function

Custom Protein Services:

The ICE Bioscience Protein Science Platform offers custom protein services for various applications.

Biochemical Testing Levels:

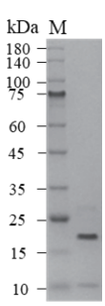
Purity: > 85%
Protein conc.: > 0.5 mg/mL
Assay activity validation

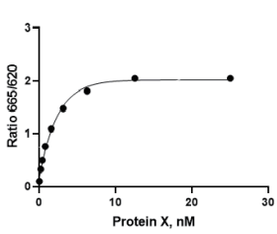
Biophysical Testing Levels:

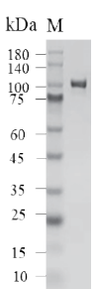
Purity: > 90%
Protein conc.: > 0.5 mg/mL
SPR activity validation

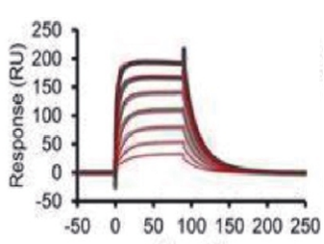
Crystalline-level Protein:

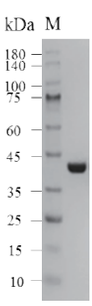
Purity: > 95%
Protein conc.: > 5 mg/mL
Aggregate: < 5%

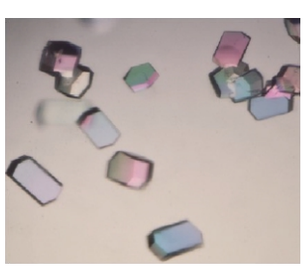










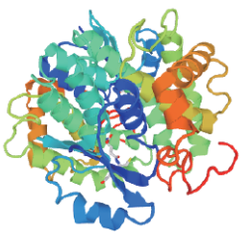


http://en.ice-biosci.com marketing@ice-biosci.com ICE Bioscience

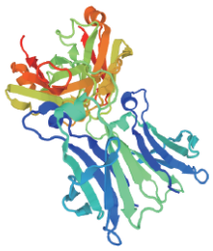
The ICE Bioscience Protein Science Platform offers a variety of protein tags to meet different application needs.

Tags	Properties
6 x His	840 Da, Common Purification Tags, Unstructured
GST	26 kDa, Affinity Purification Tag, High Solubility, Homodimer
MBP	43 kDa, Affinity Purification Tag, High Solubility
Flag	1013 Da, Common Purification and Detection Tags
Fc	26 kDa, Affinity Purification Tag, Homodimer, High Expression
CBD	28 kDa, Specific Purification Tag, Removable by DTT Cleavage
Strep	1058 Da, Specific Binding of Streptavidin
Sumo	11 kDa, Molecular Chaperone, Heat-Resistant/Protease, Removable by ULP-1 Cleavage
Trx	12 kDa, Molecular Chaperone, Assists in Disulfide Bond Formation, High Solubility
Avi	1829 Da, Site-Specific Biotin Labeling
DsbA	25 kDa, Molecular Chaperone, Localizes to the Periplasm, Assists in Disulfide Bond Formation
DsbC	25 kDa, Molecular Chaperone, Localizes to the Periplasm, Assists in Disulfide Bond Formation

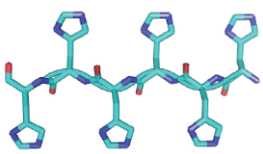
GST



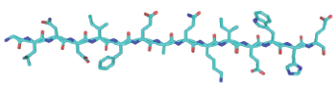
Fc



6 x His

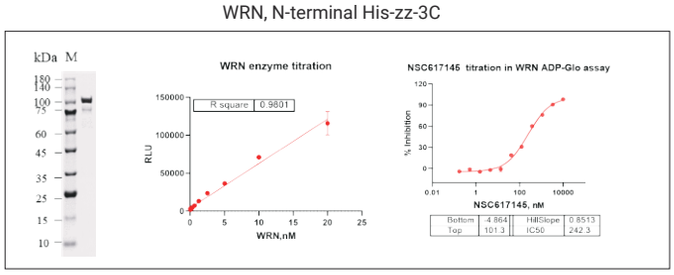


Avi

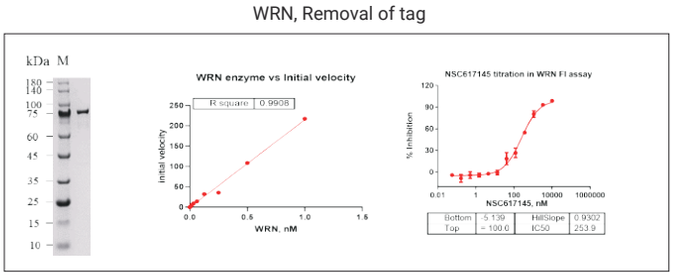


ICE Bioscience Protein Science Platform offers protein tag removal services.

WRN, N-terminal His-zz-3C



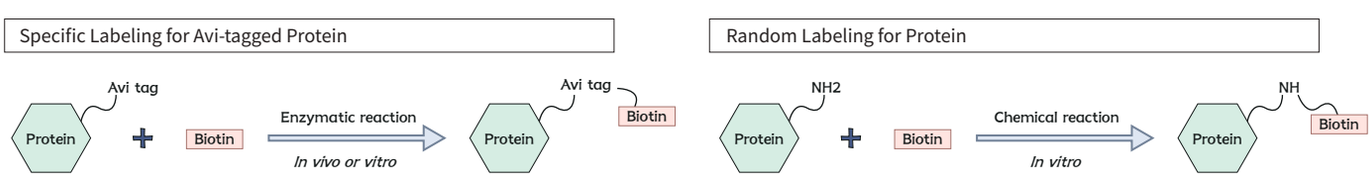
WRN, Removal of tag



SDS-PAGE and Activity Results of WRN Protein After Tag Removal

ICE Bioscience Protein Science Platform offers protein biotinylation services.

Efficient biotin labeling technology supports both random and site-specific labeling, suitable for SPR, biochemical assays, and other applications.



QC

Kinase Products

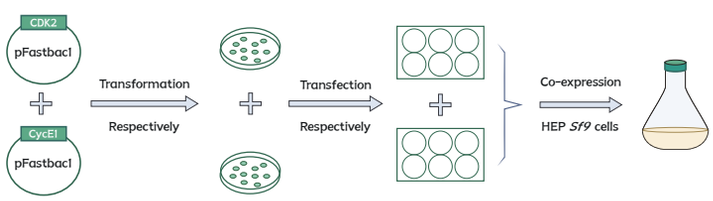
Protein kinases are one of the most important enzyme families in the human genome. Abnormal regulation of kinase-mediated signaling pathways is a cause of major human diseases such as cancers, autoimmune diseases, cardiovascular diseases, neurodegenerative diseases, and metabolic disorders. Kinases are crucial drug targets.

The Protein Science Department of ICE Bioscience offers high-quality kinase products for enzymatic activity development, biophysical analysis, LC/MS analysis, and crystal structure studies. Currently, there are over 250 kinase products available, each validated by both enzymatic assays and positive compounds. Custom services are also available to meet various needs.

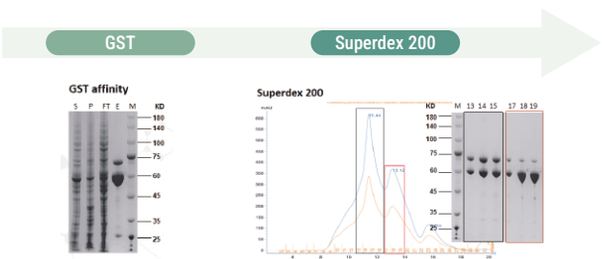
Most of ICE Bioscience's protein kinases are expressed using insect cells, with a smaller portion expressed in *E. coli* or mammalian cells. Using the expression of CDK2/CycE1 as an example, the kinase production process is as follows:

Workflow of Kinase Product Production

- **CDK2/CycE1**, binary complex, co-expressed in HEP *Sf9* cells, purified through GST column, and further separated by gel filtration chromatography.
- **Cloning and Expression**

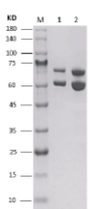


- **Purification**

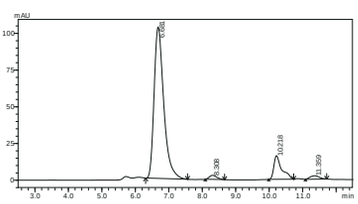


- **Quality Control**

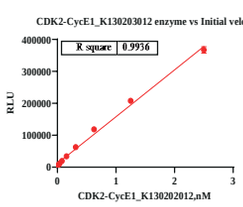
SDS-PAGE

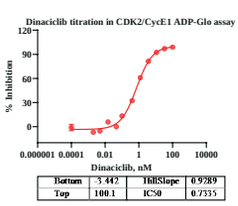


SEC-HPLC

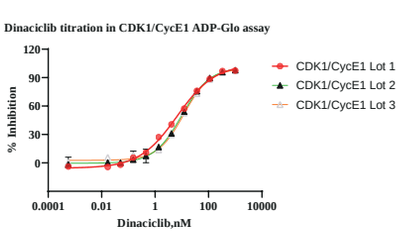


CDK2/CycE1 Activity Titration and Positive Drug IC50 Testing

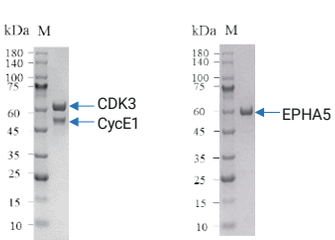




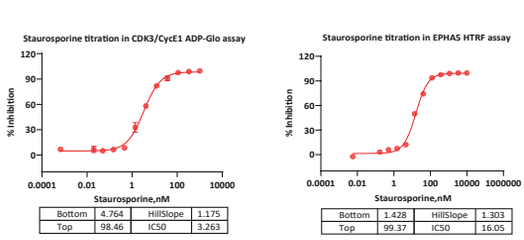
High Batch-to-Batch Reproducibility



High Purity



High Activity



Kinase Product List

All listed kinase proteins have been activity-verified and are available with testing services.

Name	Cat#	Tag
AAK1	E2209T-H11H	N-terminal His
*AAK1	S2209T-H13H	N-terminal His
*ACK	S2309T-H09GS	N-terminal GST,C-terminal StrepII
*ALK4	S2302T-H25G	N-terminal GST
*ARAF[Y301D/Y302D]	S2302T-H19G	N-terminal GST
*BARK1	S2309F-H10GS	N-terminal GST,C-terminal StrepII
*BCR-RET	S2312T-H22GH	N-terminal GST,C-terminal His
BIKE	E2209T-H12H	N-terminal His
*BIKE	S2209T-H14H	N-terminal His
*Biotin-BARK1	S2309F-H11FA	N-terminal GST,C-terminal StrepII
*Biotin-CaMK2δ (CAMK2D)	S2309F-H25FA	N-terminal Flag,C-terminal Avi
*Biotin-FYN (isoform b)	S2309F-H31FA	N-terminal Flag/C-terminal Avi
*Biotin-LATS1/ MOBKL1A	S2309T-H35FAH2	N-terminal Flag,C-terminal Avi/ N-terminal His
*Biotin-LATS2/ MOBKL1A	S2309T-H37FAH2	N-terminal His,C-terminal Avi/ N-terminal His
*Biotin-MST2	S2309F-H41FA	N-terminal Flag,C-terminal Avi
*Biotin-PIK3CA/ PIK3R1	S2310F-H02HF2	C-terminal His/N-terminal Flag, C-terminal Avi
*Biotin-PIK3CA [E545K]/PIK3R1	S2310F-H07HF2	N-terminal His/N-terminal Flag, C-terminal Avi
*BRAF	S2302T-H20G	N-terminal GST
*BRAF	S2312T-H15GH	N-terminal GST,C-terminal His
*BRSK1	S2309F-H15GS	N-terminal GST,C-terminal StrepII
*BRSK1	S2309T-H16GS	N-terminal GST,C-terminal StrepII
*BRSK2	S2308F-H04GS	N-terminal GST,C-terminal StrepII
*BTK	S2210T-H45G	N-terminal GST
*BTK[A428D](inactive)	S2305T-H34G	N-terminal GST
*BTK[C481R]	S2305T-H36G	N-terminal GST
*BTK[C481S]	S2301T-H01G	N-terminal GST
*BTK[L528W](inactive)	S2305T-H32G	N-terminal GST
*BTK[M437R]	S2305T-H33G	N-terminal GST
*BTK[T316A]	S2301T-H02G	N-terminal GST
*BTK[T474I]	S2301T-H03G	N-terminal GST
*BTK[T474S]	S2301T-H04G	N-terminal GST
*BTK[V416L]	S2305T-H35G	N-terminal GST
*BUB1/BUB3	S2309F-H22GF2	N-terminal GST,C-terminal Flag/ C-terminal Flag
*CaMK1β	S2402F-H04GF	N-terminal GST,C-terminal Flag
*CaMK2α	S2302F-H11G	N-terminal GST
*CDK1/CycA2	S2211F-H58GH2	N-terminal GST/N-terminal GST, C-terminal His
*CDK1/CycB1	S2211F-H66G2	N-terminal GST/N-terminal GST
*CDK1/CycE1	S2211F-H60G2	N-terminal GST/N-terminal GST
*CDK1/CycE1	S2211F-H61GH2	N-terminal GST/N-terminal His
*CDK1/CyclinE2	S2308F-H31G2	N-terminal GST/N-terminal GST
*CDK12/Cyclin K	S2304T-H80GH2	N-terminal GST/N-terminal Flag, C-terminal His
*CDK13/Cyclin K	S2304T-H82GH2	N-terminal GST/N-terminal Flag, C-terminal His
*CDK14/CyclinY	S2307F-H32G2	N-terminal GST/N-terminal GST
*CDK16/CyclinY	S2307F-H38G2	N-terminal GST/N-terminal GST
*CDK17/CyclinY	S2401F-H19GH2	N-terminal GST,C-terminal His/ N-terminal GST
*CDK17/p35NCK	S2401F-H20GH2	N-terminal GST,C-terminal His/N-terminal GST
*CDK18/CyclinY	S2307F-H43G2	N-terminal GST/N-terminal GST
*CDK19/CyclinC	S2307F-H28G2	N-terminal GST/N-terminal GST
*CDK2/CycA2	S2211F-H65GH2	N-terminal GST/N-terminal His

Name	Cat#	Tag
*CDK2/CycD1	S2305F-H60GH2	N-terminal GST/N-terminal GST, C-terminal His
*CDK2/CycE1	S2211F-H62G2	N-terminal GST/N-terminal GST
*CDK2/CycE1	S2211F-H63GH2	N-terminal GST/N-terminal His
*CDK2/CyclinE2	S2308F-H32G2	N-terminal GST/N-terminal GST
*CDK3/CycE1	S2304F-H03G2	N-terminal GST/N-terminal GST
*CDK3/CycE1	S2304F-H04GH2	N-terminal GST/N-terminal His
*CDK4/CycD1	S2305F-H42GH2	N-terminal GST/N-terminal GST, C-terminal His
*CDK4/CycD2	S2305F-H59GH2	N-terminal GST/C-terminal His
*CDK4/CycD3[S259A]	S2305F-H43GH2	N-terminal GST/C-terminal His
*CDK5/p25NCK	S2307F-H21GH2	N-terminal GST/N-terminal His
*CDK5/p35NCK	S2307F-H22G2	N-terminal GST/N-terminal GST
*CDK6/CycD1	S2305F-H47GH2	N-terminal GST/ N-terminal GST,C-terminal His
*CDK6/CycD3	S2305F-H48GH2	N-terminal GST/C-terminal His
*CDK7/CCNH/MNAT1	S2305F-H52H3	N-terminal His/ N-terminal His/N-terminal His
*CDK8/CyclinC	S2307F-H26G2	N-terminal GST/N-terminal GST
*CDK9/Cyclin K	S2305F-H38GFH2	N-terminal GST/N-terminal Flag, C-terminal His
*CDK9/Cyclin T1	S2305F-H39GH2	N-terminal GST/N-terminal GST, C-terminal His
*CK1α(CSNK1A1)	S2211F-H08G	N-terminal GST
*CK1γ1(CSNK1G1)	S2211F-H09G	N-terminal GST
*CK1γ2(CSNK1G2)	S2211F-H10G	N-terminal GST
*CK1γ3	S2211F-H11G	N-terminal GST
*CK1γ3(CSNK1G3)	S2312F-H20GH	N-terminal GST,C-terminal His
CK1ε(CSNK1E)	E2304T-H47H	N-terminal His
*CK2α1/CK2β	S2211F-H13GH2	N-terminal GST/N-terminal His
*CK2α2/CK2β	S2304T-H74GH2	N-terminal GST/N-terminal His
*CK2α2[C336S]/CK2β	S2304T-H73GH2	N-terminal GST/N-terminal His
*CLK3	S2308F-H05GS	N-terminal GST,C-terminal StrepII
*CRIK(CIT)	S2309T-H27GS	N-terminal GST,C-terminal StrepII
*CSK	S2211F-H16G	N-terminal GST
CSNK1D	E2311T-H10G	N-terminal GST
*DCAMKL1	S2309T-H28GS	N-terminal GST,C-terminal StrepII
*DDR2	S2211T-H18G	N-terminal GST
*DDR2[T654M]	S2308T-H36G	N-terminal GST
*DMPK1	S2309T-H29GS	N-terminal GST,C-terminal StrepII
*DMPK2	S2309T-H30GS	N-terminal GST,C-terminal StrepII
*DYRK1A	S2211F-H19G	N-terminal GST
*DYRK4	S2308F-H07FS	N-terminal Flag,C-terminal StrepII
*EGFR	S2208T-H29H	N-terminal His
*EGFR	S2301T-H33G	N-terminal GST
*EGFR[C797S/L858R]	S2304T-H31G	N-terminal GST
*EGFR[C797S]	S2304T-H30G	N-terminal GST
*EGFR[d746-750/C797A]	S2308T-H35GS	N-terminal GST,C-terminal StrepII
*EGFR[d746-750/C797G]	S2308T-H34GS	N-terminal GST,C-terminal StrepII
*EGFR[d746-750/C797S]	S2304T-H33G	N-terminal GST
*EGFR[d746-750/ T790M/C797G]	S2303T-H35G	N-terminal GST
*EGFR[d746-750/ T790M/C797S/L858R]	S2304T-H35G	N-terminal GST
*EGFR[d746-750/ T790M/C797S]	S2304T-H34G	N-terminal GST
*EGFR[d746-750/ *T790M/L858R]	S2304T-H36G	N-terminal GST
*EGFR[d746-750/T790M]	S2301T-H05G	N-terminal GST
*EGFR[d746-750/T790M]	S2301T-H26G	N-terminal GST

Unless otherwise specified, the purified proteins here are derived from human species. These proteins were expressed using an *E.coli* expression system. *These proteins were expressed using an insect expression system. **These proteins were expressed using the HEK293 expression system.

Name	Cat#	Tag
*EGFR[L858R/T790M]	S2301T-H06G	N-terminal GST
*EGFR[L858R/T790M]	S2301T-H27G	N-terminal GST
*EGFR[L861Q]	S2304T-H38G	N-terminal GST
*EGFR[T790M/C797S/L858R]	S2301T-H07G	N-terminal GST
*EGFR[T790M/C797S/L858R]	S2301T-H28G	N-terminal GST
*EGFR[T790M/C797S]	S2304T-H40G	N-terminal GST
*EGFR[T790M]	S2304T-H39G	N-terminal GST
*EPHA1	S2301T-H18G	N-terminal GST
*EPHA10	S2304T-H87G	N-terminal GST
*EPHA2	S2301T-H19G	N-terminal GST
*EPHA3	S2301T-H20G	N-terminal GST
*EPHA4	S2301T-H21G	N-terminal GST
*EPHA5	S2301T-H22G	N-terminal GST
*EPHA7	S2301T-H24G	N-terminal GST
*EPHB1	S2301T-H29G	N-terminal GST
*EPHB2	S2301T-H30G	N-terminal GST
*EPHB3	S2301T-H31G	N-terminal GST
*EPHB4	S2301T-H32G	N-terminal GST
*EPHB6(inactive)	S2304T-H88G	N-terminal GST
*ERBB4	S2307T-H46GF	N-terminal GST,C-terminal Flag
*Erk7(MAPK15)	S2308F-H08GS	N-terminal GST,C-terminal StrepII
*ERN2	S2308T-H09GS	N-terminal GST,C-terminal StrepII
*FGFR1	S2301T-H08G	N-terminal GST
*FGFR1[W666R]	S2308T-H17G	N-terminal GST
*FGFR10P-FGFR1	S2301T-H09G	N-terminal GST
*FGFR2	S2301T-H10G	N-terminal GST
*FGFR2[C491F]	S2306T-H08G	N-terminal GST
*FGFR2[C491S]	S2306T-H07G	N-terminal GST
*FGFR2[E565A]	S2306T-H13G	N-terminal GST
*FGFR2[E565G]	S2306T-H09G	N-terminal GST
*FGFR2[K526E]	S2306T-H10G	N-terminal GST
*FGFR2[K641N]	S2306T-H16G	N-terminal GST
*FGFR2[K641R]	S2306T-H11G	N-terminal GST
*FGFR2[K659M]	S2306T-H18G	N-terminal GST
*FGFR2[K659N]	S2303T-H03G	N-terminal GST
*FGFR2[L617V]	S2306T-H17G	N-terminal GST
*FGFR2[M537I]	S2306T-H14G	N-terminal GST
*FGFR2[N549H]	S2303T-H04G	N-terminal GST
*FGFR2[N549K]	S2306T-H12G	N-terminal GST
*FGFR2[R612T]	S2303T-H05G	N-terminal GST
*FGFR2[V564F]	S2303T-H06G	N-terminal GST
*FGFR2[V564I]	S2303T-H07G	N-terminal GST
*FGFR2[V564L]	S2306T-H15G	N-terminal GST
*FGFR3	S2301T-H11G	N-terminal GST
*FGFR3[V553L]	S2310T-H11G	N-terminal GST
*FGFR3[V553M]	S2310T-H12G	N-terminal GST
*FGFR3[E587Q]	S2310T-H13G	N-terminal GST
*FGFR3[G697C]	S2303T-H27G	N-terminal GST
*FGFR3[K650E]	S2303T-H28G	N-terminal GST
*FGFR3[K650M]	S2303T-H29G	N-terminal GST
*FGFR3[K650Q]	S2303T-H30G	N-terminal GST
*FGFR3[N540K]	S2310T-H10G	N-terminal GST
*FGFR3[V555L]	S2303T-H26G	N-terminal GST
*FGFR3[V555M]	S2303T-H31G	N-terminal GST
*FGFR4	S2301T-H12G	N-terminal GST
*FGFR4[N535K]	S2303T-H33G	N-terminal GST
*FGFR4[V550L]	S2303T-H32G	N-terminal GST
*FGFR4[V550M]	S2303T-H34G	N-terminal GST
*FLT3-ITD	S2306T-H19GH	N-terminal GST,C-terminal His
*FLT3-ITD[F691L]	S2306T-H20GH	N-terminal GST,C-terminal His
*FMS	S2304T-H50G	N-terminal GST
*FYN(isoform a)	S2303F-H20G	N-terminal GST
*SIK3(QSK)	S2308T-H14GS	N-terminal GST,C-terminal StrepII
*Src	S2303F-H16G	N-terminal GST
*Src-ZAP70	S2211T-H51G	N-terminal GST
*STK33	S2401F-H12GH	N-terminal GST,C-terminal His
*TEC	S2302T-H39G	N-terminal GST
*TRKA(NTRK1)	S2302T-H40G	N-terminal GST

Name	Cat#	Tag
GAK	E2202T-H24H	N-terminal His
*GCN2	S2308F-H10GF	N-terminal GST,C-terminal Flag
*GSK3α	S2304F-H51G	N-terminal GST
*GSK3β	S2304F-H52G	N-terminal GST
*HER2	S2302T-H06G	N-terminal GST
*HER2	S2309T-H01GS	N-terminal GST,C-terminal StrepII
*HER2[A775-G776 ins YVMA]	S2309T-H05GS	N-terminal GST,C-terminal StrepII
*HER2[P780-Y781insGSP]	S2309T-H02GS	N-terminal GST,C-terminal StrepII
*HER2[V777-G778 ins CG]	S2309T-H03GS	N-terminal GST,C-terminal StrepII
*HER2[V777-G778 ins GS]	S2309T-H04GS	N-terminal GST,C-terminal StrepII
*HIPK1	S2309F-H33GF	N-terminal GST,C-terminal Flag
*HPK1(MAP4K1)	S2211T-H41GF	N-terminal GST-Flag
*IKKβ(IKBKB)	S2309F-H06HF	N-terminal His,C-terminal Flag
*INSR	S2210T-H39G	N-terminal GST
*IRAK4	S2305F-H12GS	N-terminal GST,C-terminal StrepII
*ITK	S2304F-H53G	N-terminal GST
*JAK1(JH1)	S2301T-H14G	N-terminal GST
*JAK2(JH1/JH2)	S2301T-H15G	N-terminal GST
*JAK3(JH1)	S2301T-H17H	N-terminal His
*KHS1	S2304F-H54G	N-terminal GST
*KHS1	S2312F-H16GH	N-terminal GST,C-terminal His
*KIT	S2304T-H55G	N-terminal GST
*LCK	S2210F-H38G	N-terminal GST
*LRRK2	S2304T-H96G	N-terminal GST
*MAP2K1	S2302F-H13H	N-terminal His
*MAP2K6	S2302F-H04H	N-terminal His
*MAPKAPK2	S2306F-H01G	N-terminal GST
*MET	S2304T-H56G	N-terminal GST
*MET[D1228H]	S2307T-H10G	N-terminal GST
*MET[D1228N]	S2307T-H11G	N-terminal GST
*MET[Y1230A]	S2307T-H12G	N-terminal GST
*MET[Y1230C]	S2307T-H13G	N-terminal GST
*MET[Y1230D]	S2307T-H14G	N-terminal GST
*MKNK2[T379D]	S2302T-H21G	N-terminal GST
*MLK3	S2302T-H05G	N-terminal GST
MPSK1	E2309T-H17H	N-terminal His
*MST2	S2309F-H40G	N-terminal GST
*MYT1	S2210F-H30G	N-terminal GST
*NIK	S2211T-H20G	N-terminal GST
*NIK	S2312T-H25GH	N-terminal GST,C-terminal His
*NuaK1(ARK5)	S2310F-H09GF	N-terminal GST,C-terminal Flag
p38β(MAPK11)	E2211F-H22G	N-terminal GST
*PAK4	S2211F-H25G	N-terminal GST
*PAK4	S2312F-H19GH	N-terminal GST,C-terminal His
*PIM1	S2305F-H58GH	N-terminal GST,C-terminal His
*PKCα	S2303F-H21G	N-terminal GST
*PLK1	S2211F-H29G	N-terminal GST
*PLK2	S2308T-H29GS	N-terminal GST,C-terminal StrepII
*PLK3	S2302T-H23G	N-terminal GST
*QIK(SNF1LK2)	S2308F-H12GS	N-terminal GST,C-terminal StrepII
*RAF1[Y340D/Y341D]	S2302T-H14G	N-terminal GST
*RET	S2305T-H09GH	N-terminal GST,C-terminal His
*RET[L790F]	S2308T-H19GH	N-terminal GST,C-terminal His
*RIPK1	S2210T-H44G	N-terminal GST
*RIPK1	S2212T-M12G	N-terminal GST
*RIPK1	S2305T-C28G	N-terminal GST
*RIPK1	S2305T-D30G	N-terminal GST
*RIPK1	S2305T-R29G	N-terminal GST
*RIPK2	S2303T-H17G	N-terminal GST
*RIPK3	S2303F-H18G	N-terminal GST
*RIPK3	S2308T-H25G	N-terminal GST
*ROCK1	S2210T-H40G	N-terminal GST
*ROCK2	S2309T-H44H	C-terminal His
*TRKB(NTRK2)	S2302T-H41G	N-terminal GST
*TTK	S2302F-H43G	N-terminal GST
*TXK	S2302T-H44G	N-terminal GST
*TYK2(JH1)	S2301T-H13G	N-terminal GST
*TYK2(JH2)	S2303T-H15H	N-terminal His

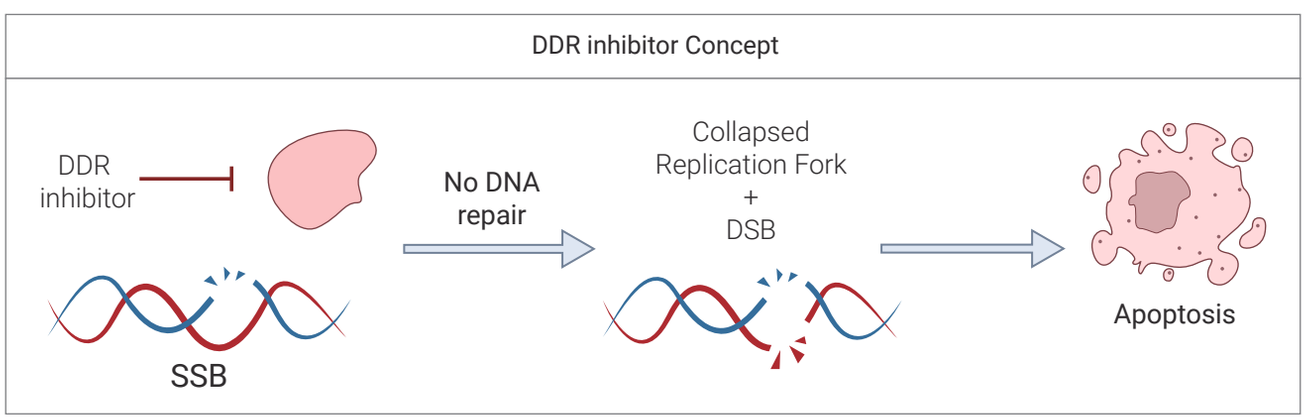
Unless otherwise specified, the purified proteins here are derived from human species. These proteins were expressed using an *E.coli* expression system. *These proteins were expressed using an insect expression system. **These proteins were expressed using the HEK293 expression system. RIPK1 proteins are derived from Mouse species, RIPK1 proteins are derived from Cynomolgus species, and RIPK1 proteins are derived from Canine species. RIPK1 proteins are derived from Rat species.

Name	Cat#	Tag
*VEGFR2	S2210T-H41G	N-terminal GST
*VRK1	S2308F-H03GS	N-terminal GST,C-terminal StrepII
*WEE1	S2308T-H20G	N-terminal GST
*WEE2	S2210F-H15G	N-terminal GST
*Biotin-PIK3CA[H1047R]/PIK3R1	S2310F-H05HF2	C-terminal His/N-terminal Flag,C-terminal Avi
*SIK	S2401T-H11G	N-terminal GST
*CDK15/CyclinY	S2401F-H21GH2	N-terminal GST,C-terminal His/N-terminal GST
*LIMK2	S2309F-H43GF	N-terminal GST,C-terminal Flag
*CHK1[I471V]	S2403T-H25GF	N-terminal GST,C-terminal Flag
*CHK1	S2403F-H24GF	N-terminal GST,C-terminal Flag
*NEK9	S2402T-H16GF	N-terminal GST,C-terminal Flag
*PKCε	S2402F-H23GF	N-terminal GST,C-terminal Flag
*TAOK1	S2402T-H31GF	N-terminal GST,C-terminal Flag
*TAOK2	S2402T-H27GF	N-terminal GST,C-terminal Flag
*FLT1	S2402T-H32GF	N-terminal GST,C-terminal Flag
*HIPK4	S2402F-H08GF	N-terminal GST,C-terminal Flag
*ULK1	S2308T-H15GS	N-terminal GST,C-terminal StrepII

Unless otherwise specified, the purified proteins here are derived from human species. These proteins were expressed using an *E.coli* expression system. *These proteins were expressed using an insect expression system. **These proteins were expressed using the HEK293 expression system.

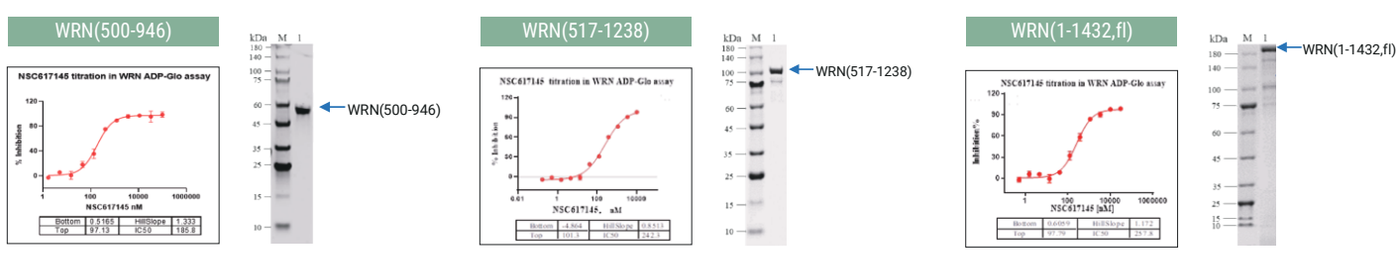
DNA Damage Repair Protein Products

In human cells, DNA suffers hundreds to thousands of damages daily due to exogenous stimuli and endogenous metabolic processes. If a cell loses its ability to effectively repair DNA damage, it can lead to genomic alterations, transcription errors, and subsequently affect signal transduction and essential cellular functions through the translation process. This may result in cellular aging, apoptosis, and carcinogenesis. DNA damage can cause severe adverse effects; hence, organisms have evolved various repair mechanisms to cope with different types of damage, known as DDR (DNA damage repair). There are four main types of DNA repair in eukaryotes: nucleotide excision repair (NER), base excision repair (BER), mismatch repair (MMR), and double-strand break repair (DSBR). NER and BER are collectively referred to as excision repair, which can remove damaged sections from the DNA molecule and then use the intact strand as a template to synthesize the excised part, thereby restoring the DNA double helix to its normal state. MMR can correct mismatches that occur during DNA replication. DSB is a severe type of damage that can lead to genomic sequence loss and rearrangement.



Drug targets related to DNA damage repair include WRN, PARP, POLQ, and p53. Currently, the Protein Science Department of ICE Bioscience has expressed and purified several high-purity, high-activity DDR-related proteins.

Case Study: WRN



WRN purity and activity test results

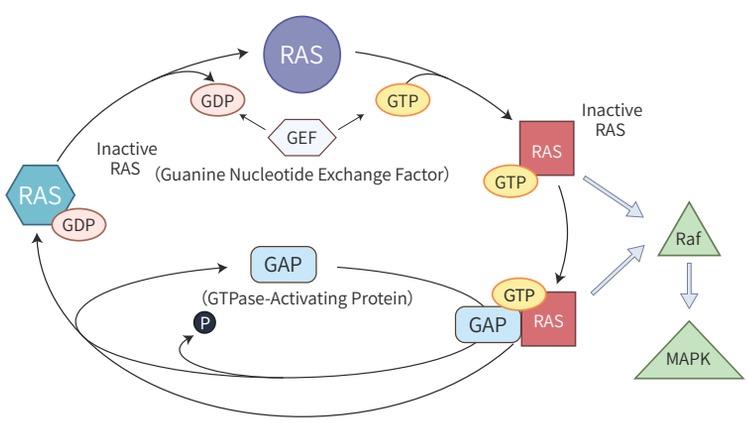
Name	Cat#	Tag
Biotin-p53[Y220C]	E2311T-H08HA	N-terminal His,C-terminal Avi
Biotin-PARP1(CD)	E2312T-H10HA	N-terminal His-Avi
Biotin-PARP2(CD)	E2312T-H11HA	N-terminal His-Avi
BLM	E2202T-H19H	N-terminal His
c-Myc	E2210T-H11H	N-terminal His
c-Myc	E2305F-H32SH	N-terminal SUMO,C-terminal His
c-Myc	E2202T-H22H	N-terminal His
*DHX9	S2309F-H12HF	N-terminal His,C-terminal Flag
*DHX9	S2309T-H13HF	N-terminal His,C-terminal Flag
**DHX9	H2309T-H01HF	N-terminal His,C-terminal Flag
*HELQ	S2307F-H01HMF	N-terminal His-MBP,C-terminal Flag
MAT2A	E2207F-H12H	N-terminal His
p53	E2202T-H01H	N-terminal His
p53	E2203F-H02H	N-terminal His
p53	E2203F-H03CG	N-terminal cMyc-GST
p53[Y220C]	E2207T-H11H	N-terminal His
PARG	E2202F-H26H	N-terminal His
PARG	E2209T-H23H	N-terminal His
*PARP1	S2202T-H27H	N-terminal His
*PARP10	S2203T-H39FS	N-terminal Flag,C-terminal StrepII
*PARP11	S2203F-H40GH	N-terminal GST,C-terminal His
*PARP12	S2203T-H41G	N-terminal GST

Name	Cat#	Tag
*PARP14	S2203T-H42G	N-terminal GST
*PARP2	S2203T-H31G	N-terminal GST
*PARP3	S2203F-H32G	N-terminal GST
*PARP5A	S2203T-H34G	N-terminal GST
*PARP5B	S2203T-H35G	N-terminal GST
*PARP6	S2203F-H36G	N-terminal GST
POLN	E2212T-H19H	N-terminal His,C-terminal Flag
*POLQ	S2311T-M01H	N-terminal His
*POLQ	S2201T-H01H	N-terminal His
*POLQ	S2201T-H02H	N-terminal His
RecQ1	E2204T-H02H	N-terminal His
RecQ4	E2204T-H01HU	N-terminal His-SUMO
RecQ5	E2204T-H04H	N-terminal His
TREX1	E2209T-H32M	N-terminal MBP
TREX1	E2209T-M34H	N-terminal His
TREX2	E2209F-H33M	N-terminal MBP
TREX2	E2209F-M35H	N-terminal His
*WRN	S2201T-H03H	N-terminal His
*WRN	S2207F-H01HF	N-terminal His,C-terminal Flag
*WRN	S2212T-H56HZ	N-terminal His
*WRN	S2212T-H56	No tag
*WRN	S2312T-R01HF	N-terminal His,C-terminal Flag
WRN	E2309T-H07H	N-terminal His

Unless otherwise specified, the purified proteins here are derived from human species. These proteins were expressed using an *E.coli* expression system. *These proteins were expressed using an insect expression system. **These proteins were expressed using the HEK293 expression system. POLQ proteins are derived from Mouse species, TREX1 proteins are derived from Mouse species, and TREX2 proteins are derived from Mouse species. WRN proteins are derived from Rat species.

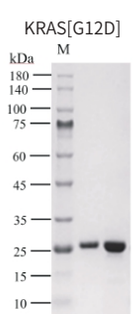
RAS-Associated Protein Products

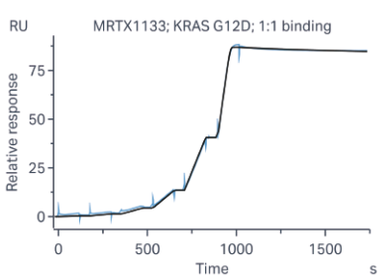
The Rat Sarcoma (RAS) gene family (KRAS, NRAS, HRAS) possesses GTPase activity and regulates various signaling pathways within cells. As proto-oncogenes, mutations in RAS can keep them in an active state, leading to abnormal cell growth and the development of various human cancers. Mutations in all three RAS members can cause cancer, but KRAS mutations are the most common, accounting for 85% of RAS mutations. The Protein Science Department of ICE Bioscience has expressed several high-activity RAS-related proteins, including KRAS series mutations.

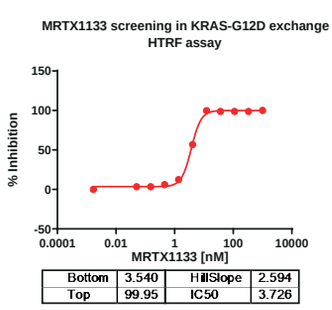


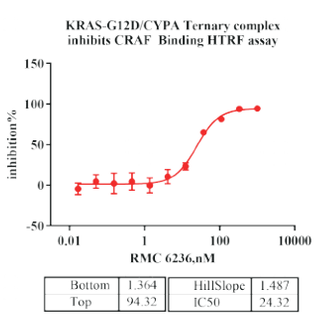
ICE Bioscience produces wild-type KRAS and various mutants, all with high purity and high activity.

Case Study: KRAS[G12D]









KRAS[G12D] purity and activity test results

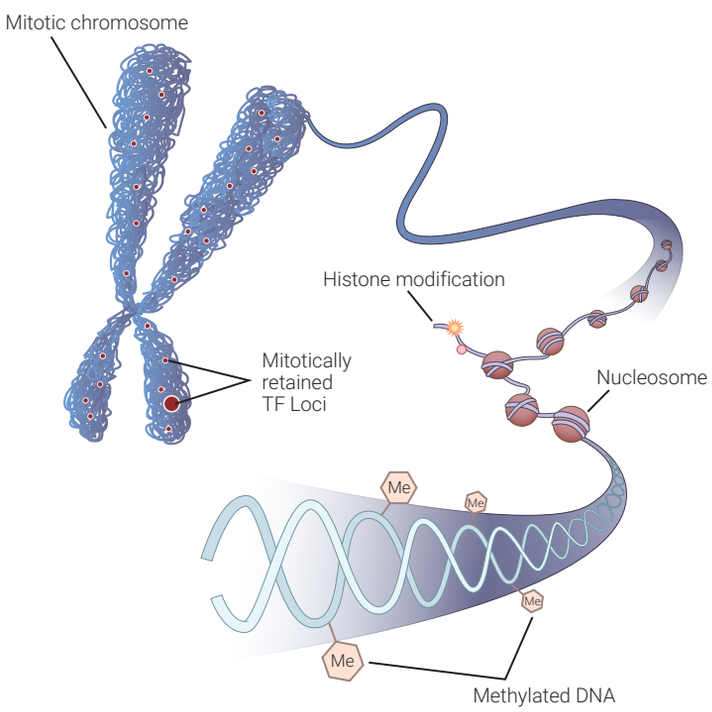
Name	Cat#	Tag
Biotin-KRAS[G12A]	E2402T-H02HA	N-terminal His,C-terminal Avi
cRAF	E2211T-H35G	N-terminal GST
cRAF	E2211T-H36G	N-terminal GST
cRAF	E2310T-H06H	N-terminal His
CypA	E2302F-H01H	N-terminal His
HRAS	E2304T-H77HA	N-terminal His,C-terminal Avi
KRAS[G12C]	E2207T-H16H	N-terminal His
KRAS[G12C]	E2305T-H39HA	N-terminal His,C-terminal Avi
KRAS[G12D]	E2207T-H18H	N-terminal His
KRAS[G12D]	E2305T-H40HA	N-terminal His,C-terminal Avi
KRAS[G12D]	E2308F-H04H	N-terminal His
*KRAS[G12D]	S2308F-H37H	N-terminal His
KRAS[G12R]	E2209T-H37HA	N-terminal His;C-terminal Avi

Name	Cat#	Tag
KRAS[G12V]	E2207T-H17HA	N-terminal His;C-terminal Avi
KRAS[G13C]	E2209T-H38HA	N-terminal His,C-terminal Avi
KRAS[G13D]	E2209T-H39HA	N-terminal His;C-terminal Avi
KRAS[Q61H]	E2209T-H40HA	N-terminal His,C-terminal Avi
NRAS	E2304T-H76HA	N-terminal His,C-terminal Avi
SOS1	E2204T-H10G	N-terminal GST
SOS2	E2203T-H46G	N-terminal GST
KRAS	E2207T-H15HA	N-terminal His,C-terminal Avi
Biotin-KRAS[Q61R]	E2403T-H02HA	N-terminal His,C-terminal Avi
Biotin-KRAS[A146T]	E2403T-H01HA	N-terminal His,C-terminal Avi
Biotin-KRAS[G12S]	E2210T-H13HA	N-terminal His,C-terminal Avi
Biotin-KRAS[Q61K]	E2403T-H05HA	N-terminal His,C-terminal Avi
Biotin-KRAS[Q61L]	E2403T-H06HA	N-terminal His,C-terminal Avi

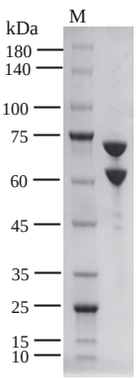
Unless otherwise specified, the purified proteins here are derived from human species. These proteins were expressed using an *E.coli* expression system. *These proteins were expressed using an insect expression system. **These proteins were expressed using the HEK293 expression system.

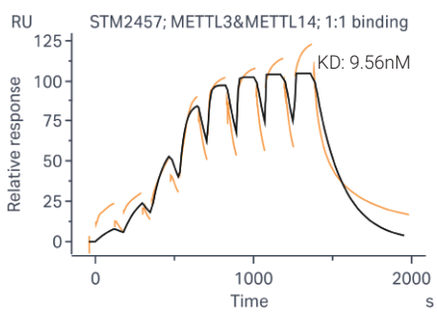
Epigenetic Protein Products

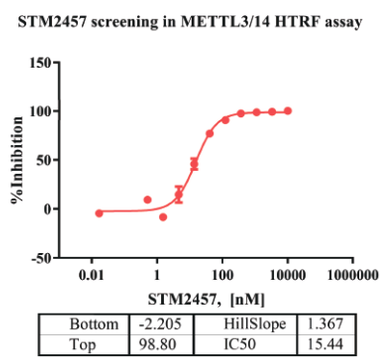
Epigenetics is a mechanism that changes the phenotype of an organism without involving changes in the DNA sequence, and these changes can be inherited by offspring. Epigenetic regulatory mechanisms include various methods such as DNA methylation, histone modification, and non-coding RNA regulation. The Protein Science Department of ICE Bioscience has expressed several high-activity proteins related to epigenetic targets.



Case Study: METTL3/METTL14







Bottom	-2.205	HillSlope	1.367
Top	98.80	IC50	15.44

METTL3/METTL14 purity and activity test results

Epigenetic Protein Product List

All listed epigenetic proteins have been activity-verified and are available with testing services.

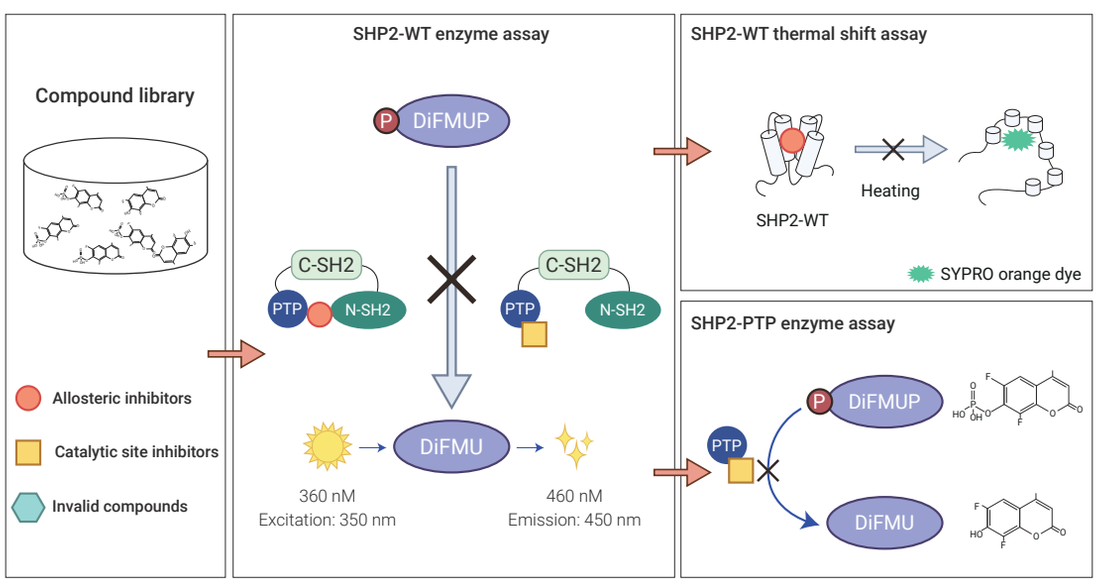
Name	Cat#	Tag
*ALKBH5	S2210F-H14G	N-terminal GST
BRD2(BD1)	E2208T-H04H	N-terminal His
BRD2(BD1/BD2)	E2208T-H03H	N-terminal His
BRD2(BD2)	E2208T-H05H	N-terminal His
BRD3(BD1)	E2208T-H07H	N-terminal His
BRD3(BD1-BD2)	E2208T-H06H	N-terminal His
BRD3(BD2)	E2208T-H08H	N-terminal His
BRD4(BD1/BD2)	E2208T-H09H	N-terminal His
BRD9	E2208T-H17H	N-terminal His
BRDT(BD1/BD2)	E2208T-H12G	N-terminal GST
*BRG1	S2205T-H04H	C-terminal His
*BRM	S2205T-H02H	N-terminal His
CECR2	E2210T-H43G	N-terminal GST
*CREBBP	S2210T-H23HF	N-terminal His-Flag
DOT1L	E2303T-H12G	N-terminal GST
EHMT2(G9a)	E2303T-H10G	N-terminal GST
GLP	E2303T-H11G	N-terminal GST
*HDAC11	S2203F-H23H	N-terminal His
*HDAC2	S2203F-H12FH	C-terminal Flag-His
*HDAC3/NCOR2	S2203F-H13H2	C-terminal His/N-terminal GST
*HDAC4	S2203T-H14GH	N-terminal GST,C-terminal His
*HDAC4	S2203T-H15G	C-terminal GST
*HDAC5	S2203T-H16H	N-terminal His
*HDAC6	S2203F-H18G	N-terminal GST
*HDAC7	S2203T-H19G	N-terminal GST
*HDAC8	S2203F-H20H	C-terminal His

Name	Cat#	Tag
*HDAC9	S2203T-H21H	C-terminal His
Histone H2A	E2204F-H12H	N-terminal His
*KAT1(HAT1)	S2210F-H24HF	N-terminal His-Flag
*KAT5	S2210F-H18HF	N-terminal His-Flag
*KAT6A(MOZ)	S2210T-H19HF	N-terminal His-Flag
*KAT6B	S2210T-H20HF	N-terminal His-Flag
*KAT7	S2210F-H21HF	N-terminal His-Flag
*KAT8(MYST1)	S2210F-H22HF	N-terminal His-Flag
*METTL3/METTL14	S2206F-H01H2	N-terminal Flag/N-terminal His
NSD1	E2303T-H13G	N-terminal GST
NSD2	E2304T-H84G	N-terminal GST
NSD3	E2304T-H86G	N-terminal GST
PRMT3	E2303T-H08H	N-terminal His
SETD2	E2303T-H09G	N-terminal GST
SETD7	E2402T-H10H	N-terminal His
SIRT2	E2203T-H25H	C-terminal His
SIRT3	E2203T-H26G	N-terminal GST
SIRT5	E2203F-H28G	N-terminal GST
SIRT6	E2203F-H29G	N-terminal GST
SMARCA2	E2305T-H29G	N-terminal GST
SMARCA4	E2305T-H30G	N-terminal GST
*SMARCAL1	S2304F-H01HA	N-terminal His,C-terminal Avi
SMYD2	E2303T-H14H	N-terminal His
*HDAC1	S2203F-H11FH	C-terminal Flag-His
MLL1/WDR5/ASH2L/ RBBP5/DYP30	E2405T-H15GH5	N-terminal His/ N-terminal His/ N-terminal His/N-terminal GST/ N-terminal His

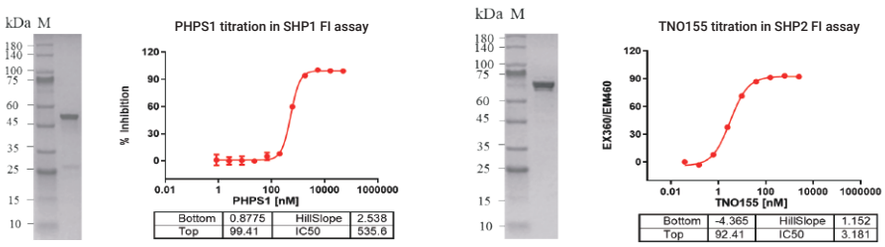
Unless otherwise specified, the purified proteins here are derived from human species. These proteins were expressed using an *E.coli* expression system. *These proteins were expressed using an insect expression system. **These proteins were expressed using the HEK293 expression system.

Phosphatase Products

Phosphatases are enzymes that can dephosphorylate their corresponding substrates, i.e., remove phosphate groups from substrate molecules through the hydrolysis of phosphomonoesters, generating phosphate ions and free hydroxyl groups. In the body, the dynamic balance of protein phosphorylation is achieved through the action of phosphatases and kinases responsible for protein phosphorylation. The balance between kinases and phosphatases is fundamental to maintaining normal physiological functions and plays a crucial role in cell regulation and signal transduction. Phosphorylation and dephosphorylation typically act as switches to activate key regulatory proteins and control signal pathway transmission. When the phosphorylation process is abnormal, the related signaling pathways may become dysfunctional, leading to various diseases such as cancer, inflammatory diseases, diabetes, infectious diseases, cardiovascular diseases, and neurodegenerative diseases. The Protein Science Department of ICE Bioscience has expressed several high-activity phosphatase proteins.



Case Study: SHP1 and SHP2



SHP1 and SHP2 purity and activity test results

Phosphatase Product List

All listed phosphatase proteins have been activity-verified and are available with testing services.

Name	Cat#	Tag
DUSP13	E2305F-H25G	N-terminal GST
DUSP22	E2302F-H37G	N-terminal GST
Lambda PP	E2305F-B20H	C-terminal His
LMPTP-A	E2305F-H22G	N-terminal GST
LMPTP-B	E2305F-H24G	N-terminal GST
MKP5	E2305T-H23H	C-terminal His
PP5	E2305F-H21G	N-terminal GST
PTP1B	E2302T-H27H	N-terminal His
PTPN12	E2302T-H30G	N-terminal GST
PTPN13	E2302T-H31G	N-terminal GST
PTPN2	E2302T-H28H	N-terminal His
PTPN22	E2209T-H24H	N-terminal His

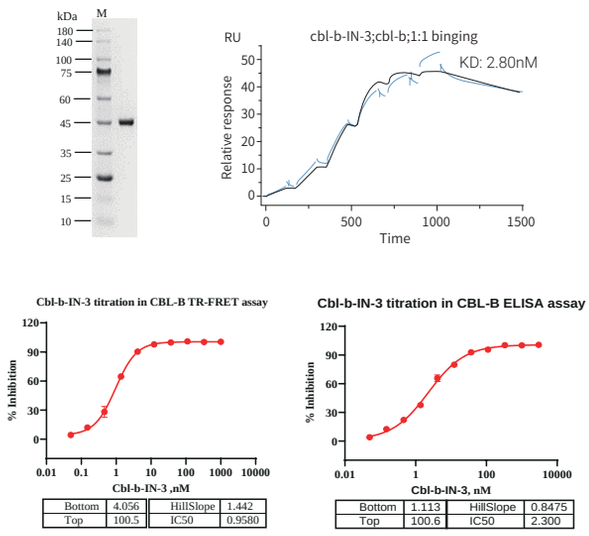
Name	Cat#	Tag
PTPN4	E2302T-H32G	N-terminal GST
PTPN7	E2302F-H29G	N-terminal GST
PTPN9	E2302T-H33G	N-terminal GST
PTPRM(PTPμ)	E2302T-H35G	N-terminal GST
SHP2	E2210F-H01H	N-terminal His
SHP2[D61G]	E2210F-H02H	N-terminal His
SHP2[E76K]	E2210F-H04H	N-terminal His
SHP2[N308D]	E2210F-H06H	N-terminal His
SHP2[N380S]	E2210F-H05H	N-terminal His
SHP2[T73I]	E2210F-H03H	N-terminal His
YopH	E2305F-Y26G	N-terminal GST
PTP1B	E2310T-H12H	N-terminal His

Unless otherwise specified, the purified proteins here are derived from human species. These proteins were expressed using an *E.coli* expression system. *These proteins were expressed using an insect expression system. **These proteins were expressed using the HEK293 expression system. Lambda PP proteins are derived from Bacteriophage lambda species, YopH proteins are derived from Yersinia pseudotuberculosis species.

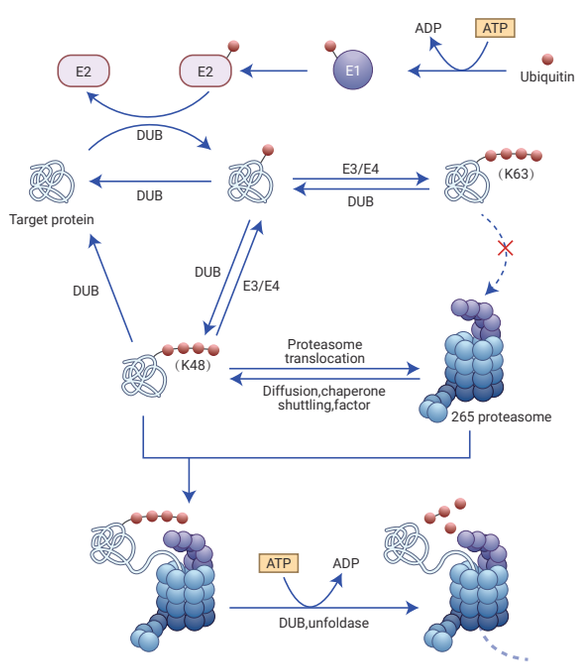
Ubiquitin-Related Protein Products

Ubiquitin is a highly conserved peptide consisting of 76 amino acid residues. The ubiquitin-proteasome system (UPS) is the primary pathway for the degradation of most cellular proteins. In the presence of ATP, the carboxyl end of ubiquitin binds to the thiol group on the E1 activating enzyme to form a thioester. Then, the E1 activating enzyme interacts with the E2 conjugating enzyme and transfers ubiquitin to E2 through a trans-thioesterification reaction. Finally, the E3 ligase catalyzes the transfer of ubiquitin to the substrate through the formation of an isopeptide bond. This substrate can undergo polyubiquitination through multiple E1-E2-E3 levels. Polyubiquitinated substrates are recognized by the 26S proteasome and cleaved into peptides, which are further hydrolyzed into amino acids by other intracellular proteases. Targeted protein degradation (TPD) technology has developed rapidly, especially proteolysis-targeting chimeras (PROTACs). The Protein Science Department of ICE Bioscience has expressed several high-activity ubiquitin-related proteins.

Case Study: CBL-B



CBL-B purity and activity test results



Ubiquitin-Related Protein Product List

All listed ubiquitin-related proteins have been activity-verified and are available with testing services.

Name	Cat#	Tag
UbcH5b	E2203F-H09H	N-terminal His
UbcH5b[C85K]/Ubiquitin	E2402T-H16HF2	N-terminal His-Flag/N-terminal His
*UBE1(UBA1)	S2203F-H08F	N-terminal Flag
UCHL1	E2310F-H08H	N-terminal His
UCHL3	E2310F-H09H	N-terminal His
UCHL5	E2310F-H10H	N-terminal His
UCH-L5(UCH37)	E2210F-H27H	N-terminal His
*USP10	S2311F-H03H	C-terminal His
*USP11	S2310F-H15H	C-terminal His
*USP13	S2307T-H03G	N-terminal GST
*USP14	S2312F-H07H	C-terminal His
*USP15	S2311F-H04H	C-terminal His
*USP16	S2310F-H16GF	N-terminal GST,C-terminal Flag
USP2	E2310T-H07H	N-terminal His
*USP20	S2310T-H24GF	N-terminal GST,C-terminal Flag
*USP25α	S2210F-H28H	C-terminal His
USP27	E2307F-H01G	N-terminal GST
*USP28	S2210F-H29H	C-terminal His
USP36	E2307T-H02G	N-terminal GST
*USP4	S2307F-H02H	C-terminal His
*USP45	S2307T-H05G	N-terminal GST
*USP46/UAF1	S2310F-H19H2	C-terminal His,C-terminal His
USP5	E2310T-H05H	N-terminal His
*USP51	S2307T-H06G	N-terminal GST
**USP51	H2308F-H03H	N-terminal His
*USP7	S2210F-H25HF	N-terminal His
*USP8	S2401T-H01GH	N-terminal GST,C-terminal His
VHL/Elongin-C/Elongin-B	E2204F-H16H3	N-terminal His/No tag/No tag
*USP9X	S2310T-H14GF	N-terminal GST,C-terminal Flag

Protein Products - Others

The Protein Science Department of ICE Bioscience has also expressed and purified motor proteins, proteases, and proteins related to metabolic and immune targets among others. The following proteins have all been activity-verified and are available for testing services:

Name	Cat#	Tag
3C protease	E2202T-H09G	N-terminal GST
ARNT[E362R]	E2209T-H43HF	N-terminal His-Gβ1,C-terminal Flag
ASH1L	E2209T-H10H	N-terminal His
BCL6	E2211T-H57TH	N-terminal Trx-His
Biotin-ANDR(DBD)	E2312T-H05HA	N-terminal His,C-terminal Avi
cGAS	E2304T-H58HU	N-terminal His-SUMO
**Biotin-CD155(PVR)	H2307T-H27HA	C-terminal His-Avi
**Biotin-CD86	H2307T-H14HA	C-terminal His-Avi
**Biotin-Human 5'-Nucleotidase(CD73)	H2307T-H08AH	C-terminal His-Avi
**Biotin-IL-17A(CTLA-8)	H2307F-H20HA	N-terminal His-Avi
Biotin-nNOS	E2312T-H06HA	N-terminal His,C-terminal Avi
Bira	E2202T-E08G	N-terminal GST
CA2	E2306F-H18H	C-terminal His
CA5A	E2306T-H20H	C-terminal His
CA5B	E2306T-H21H	C-terminal His
CA7	E2306F-H22H	C-terminal His
**CD16a[F176V]	H2304T-H19H	C-terminal His
**CD16b(NA1)	H2304T-H20H	C-terminal His
**CD16b(NA2)	H2304T-H21H	C-terminal His
**CD32 b/c	H2304T-H24H	C-terminal His
**CD32a	H2304T-H22H	C-terminal His
**CD40 Ligand(TNFSF5)	H2307T-H18F	C-terminal Fc
CENP-E(Motor Domain)	E2306T-H04G	N-terminal GST
cGAS	E2311F-M12H	C-terminal His
**CTLA-4(CD152)	H2307T-H12F	C-terminal Fc
*CTPS1	S2209F-H15FHA	C-terminal Flag-His-Avi

Name	Cat#	Tag
DHODH	E2303F-F23HN	N-terminal His-NusA
DHODH	E2304T-H43H	N-terminal His
DHODH	E2306T-F01HN	N-terminal His
Eg5(Motor Domain)	E2306T-H05G	N-terminal GST
**EGFR	H2304T-H17H	N-terminal His
eIF4E	E2211F-H56G	N-terminal GST
*ERAP1	S2305F-H55HF	C-terminal His-Flag
FALZ	E2210T-H42HF	N-terminal His,C-terminal Flag
GSPT1	E2309T-H03G	N-terminal GST
GSPT1	E2311T-H11G	N-terminal GST
HIF2α[R247E]	E2208T-H24G	N-terminal GST
*HSD17B1	S2312F-A02H	N-terminal His
HSD17B1	E2205T-H06H	N-terminal His
HSF1	E2211F-H37HB	N-terminal His-Ubiquitin
HSP90α	E2209F-H29H	C-terminal His
HSP90α	E2209T-H30H	N-terminal His-Avi
HSP90β	E2209F-H27H	C-terminal His
HSP90β	E2209T-H28HA	N-terminal His-Avi
**IL-17 RA(CD217)	H2307T-H19F	C-terminal Fc
**IL-2	H2307F-H22H	C-terminal His
**IL-2 R alpha(CD25)	H2307T-H23F	C-terminal Fc
**IL-23 R	H2307T-H21FA	C-terminal Fc-Avi
**IL23A/IL12B	H2304F-H49HA2	C-terminal His/No tag
**IL-4 R alpha(CD124)	H2307T-H25F	C-terminal Fc
IRF5	E2308F-H05H	C-terminal His
IRF5[S430D]	E2306T-H28A	N-terminal Avi
*AMSH	S2311F-H11H	N-terminal His

Unless otherwise specified, the purified proteins here are derived from human species.These proteins were expressed using an *E.coli* expression system. *These proteins were expressed using an insect expression system. **These proteins were expressed using the HEK293 expression system. Bira proteins are derived from E.coli species, cGAS proteins are derived from Mouse species, DHODH proteins are derived from Fumigatus species, HSD17B1 proteins are derived from Rabbit species.

Name	Cat#	Tag
**IRF5[S430D]	H2308F-H03F	N-terminal Flag
KIF18A	E2205T-H06H	N-terminal His
KIF18B	E2211T-H52HM	N-terminal His
KIF19	E2211T-H53HM	N-terminal His
KIF22	E2306T-H15H	N-terminal His
KIF3C(Motor Domain)	E2306T-H06G	N-terminal GST
KIF5A	E2306T-H14G	N-terminal GST
KIF7	E2306T-H16H	N-terminal His
*MAOA	S2210F-H33HF	N-terminal His-Flag
*MAOA	S2304F-H69GF	N-terminal GST,C-terminal Flag
*MAOB	S2210F-H34HF	N-terminal His-Flag
MASP-2(CCP1/CCP2/SP)	E2202T-H11H	N-terminal His
MASP-2(CCP1/CCP2/SP)	E2202T-M12H	N-terminal His
MASP-2(CCP1/CCP2/SP)	E2202T-R13H	N-terminal His
MDA5	E2403T-H04G	N-terminal GST
Menin	E2208F-H15H	N-terminal His
Menin[G331D]	E2309F-H11H	N-terminal His
Menin[G331R]	E2309F-H08H	N-terminal His
Menin[M327I]	E2303F-H24H	N-terminal His
Menin[M327V]	E2309F-H10H	N-terminal His
Menin[T349M]	E2303F-H25H	N-terminal His
MKLP1	E2306T-H11G	N-terminal GST
MKLP2	E2306T-H12G	N-terminal GST
MTDH	E2203T-H45G	N-terminal GST
**OX40(TNFRSF4)(CD134)	H2307T-H15H	C-terminal His
*PANK1β	S2312F-H03H	N-terminal His
*PANK2	S2401T-H09H	N-terminal His
*PANK2	S2401F-H08G	N-terminal GST
*PANK3	S2312F-H05H	N-terminal His
**PD-1	H2304T-H62F	C-terminal Fc
**PD-L1	H2212T-H14H	C-terminal His
**PD-L2	H2304T-H61HA	C-terminal His-Avi
*PDE3A	S2210T-H35G	N-terminal GST
*PDE3B	S2210T-H37G	N-terminal GST
*PDE4B2	S2401T-H15H	N-terminal His
PDE4C2	E2312T-H03H	N-terminal His
*PDE4D2	S2210T-H36G	N-terminal GST
*PDE4D2	S2401T-H16H	N-terminal His
*PDE5A1	S2302F-H08G	N-terminal GST
**PD-1	H2304T-H64F	C-terminal Fc
**PD-L1	H2212T-H16H	C-terminal His
**PD-L2	H2304T-H15H	C-terminal His
PRMT8	E2402F-H24H	N-terminal His
*sGCα1/sGCβ1	S2304F-H07SH2	N-terminal StrepII/C-terminal His
*sGCα2/sGCβ1	S2304F-H09SH2	N-terminal StrepII/C-terminal His
STAT3	E2308T-H03H	N-terminal His
STAT4	E2309T-H19H	N-terminal His
STAT5B	E2309T-H22H	N-terminal His
STAT6	E2309T-H18H	N-terminal His
TCF4	E2304T-H05HA	N-terminal His,C-terminal Avi
TEAD1(YBD)	E2202T-H14H	N-terminal His
TEAD2(YBD)	E2202T-H15H	N-terminal His
TEAD3(YBD)	E2202T-H16H	N-terminal His
TEAD4(YBD)	E2202T-H17H	N-terminal His
TEV	E2202T-E07H	N-terminal His
**TIGIT	H2307T-H26F	C-terminal Fc
ULP-1	E2202T-H06H	N-terminal His
*VCP	S2306F-H21GH	N-terminal GST,C-terminal His
WDR5	E2305F-H33SA	N-terminal StrepII,C-terminal Avi
YAP	E2301T-H38HSA	N-terminal His-SUMO,C-terminal Avi
β-catenin	E2304T-H04G	N-terminal GST
*Biotin-HSD17B1	S2402F-H19HA	N-terminal His-Avi
MCAK(Motor Domain)	E2306T-H08G	N-terminal GST
STAT1	E2309T-H24H	N-terminal His
STAT2	E2309T-H25H	N-terminal His
ARH3	E2207F-H02H	N-terminal His
IKZF1	E2304T-H09GA	N-terminal GST,C-terminal Avi
IKZF2	E2304T-H11GA	N-terminal GST,C-terminal Avi
IKZF3	E2304T-H26GA	N-terminal GST,C-terminal Avi
*KEAP1	S2302T-H15G	N-terminal GST
*CTPS2	S2209F-H16FHA	C-terminal Flag-His-Avi
*KEAP1	S2302T-H15G	N-terminal GST

Unless otherwise specified, the purified proteins here are derived from human species. These proteins were expressed using an *E.coli* expression system. *These proteins were expressed using an insect expression system. **These proteins were expressed using the HEK293 expression system. MASP-2(CCP1/CCP2/SP) proteins are derived from Mouse species, and MASP-2(CCP1/CCP2/SP) proteins are derived from Rat species. TEV proteins are derived from Virus species. ULP-1 proteins are derived from Yeast species.