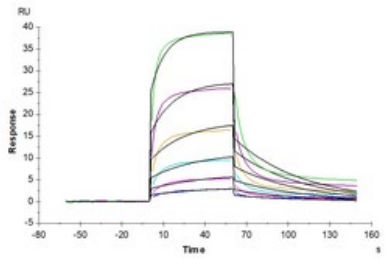
Bioactive CellTx™ HuPro®

HLA-A/B2M/KRAS G12V Monomer (Human) Recombinant Protein

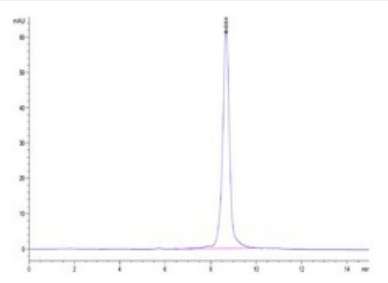
Catalog # P9792 Size 100 ug

Applications



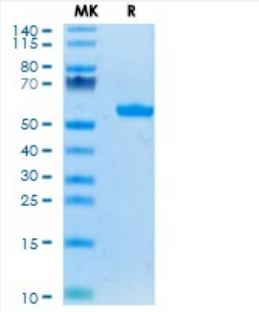
Surface Plasmon Resonance

Human HLA-A*03:01 & B2M & KRAS G12V (VVVGAVGVGK) Monomer, His Tag captured on CM5 Chip via anti-his antibody can bind Anti-HLA-A*03:01 & B2M & KRAS G12V (VVVGAVGVGK) Antibody with an affinity constant of 0.11 uM as determined in SPR assay (Biacore T200).



SEC-HPLC

The purity of Human HLA-A*03:01 & B2M & KRAS G12V (VVVGAVGVGK) Monomer is greater than 95% as determined by SEC-HPLC.



Tris-Bis PAGE

Human HLA-A*03:01 & B2M & KRAS G12V (VVVGAVGVGK) Monomer on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.

Specification

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Product Description	Human HLA-A | B2M | KRAS G12V Tetramer (NP_002107.3 | P61769 | P01116, Gly25-Thr305 | Ile21-Met119 | VVVGAVGVGK) partial recombinant protein with His-Avi tag at C-terminus expressed in HEK293 cells.
Sequence	Gly25-Thr305 | Ile21-Met119 | VVVGAVGVGK
Host	Human
Theoretical MW (kDa)	50.2
Form	Lyophilized
Preparation Method	Mammalian cell (HEK293) expression system
Quality Control Testing	SEC-HPLC and Tris-Bis PAGE SEC-HPLC The purity of Human HLA-A*03:01 & B2M & KRAS G12V (VVVGAVGVGK) Monomer is greater than 95% as determined by SEC-HPLC. Tris-Bis PAGE Human HLA-A*03:01 & B2M & KRAS G12V (VVVGAVGVGK) Monomer on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.
Recommend Usage	Biological Activity SPR SDS-PAGE The optimal working dilution should be determined by the end user.
Storage Buffer	Lyophilized from sterile distilled Water is > 100 ug/mL
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Result of bioactivity analysis

Applications

- Functional Study
- SDS-PAGE
- Surface Plasmon Resonance

  Human HLA-A*03:01 & B2M & KRAS G12V (VVVGAVGVGK) Monomer, His Tag captured on CM5 Chip via anti-his antibody can bind Anti-HLA-A*03:01 & B2M & KRAS G12V (VVVGAVGVGK) Antibody with an affinity constant of 0.11 uM as determined in SPR assay (Biacore T200).

Gene Info — B2M

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Entrez GeneID	567
Protein Accession#	NP_002107.3(HLA-A*03:01) | P61769(B2M) | VVGAVGVGK
Gene Name	B2M
Gene Alias	-
Gene Description	beta-2-microglobulin
Omim ID	109700 241600
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a serum protein found in association with the major histocompatibility complex (MHC) class I heavy chain on the surface of nearly all nucleated cells. The protein has a predominantly beta-pleated sheet structure that can form amyloid fibrils in some pathological conditions. A mutation in this gene has been shown to result in hypercatabolic hypoproteinemia
Other Designations	beta chain of MHC class I molecules|beta-2-microglobin

Gene Info — HLA-A

Entrez GeneID	3105
Protein Accession#	NP_002107.3(HLA-A*03:01) | P61769(B2M) | VVGAVGVGK
Gene Name	HLA-A
Gene Alias	HLAA
Gene Description	major histocompatibility complex, class I, A
Omim ID	106300 142800 608579
Gene Ontology	Hyperlink

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Gene Summary	HLA-A belongs to the HLA class I heavy chain paralogues. This class I molecule is a heterodimer consisting of a heavy chain and a light chain (beta-2 microglobulin). The heavy chain is anchored i n the membrane. Class I molecules play a central role in the immune system by presenting peptid es derived from the endoplasmic reticulum lumen. They are expressed in nearly all cells. The heav y chain is approximately 45 kDa and its gene contains 8 exons. Exon 1 encodes the leader peptid e, exons 2 and 3 encode the alpha1 and alpha2 domains, which both bind the peptide, exon 4 en codes the alpha3 domain, exon 5 encodes the transmembrane region, and exons 6 and 7 encode the cytoplasmic tail. Polymorphisms within exon 2 and exon 3 are responsible for the peptide bind ing specificity of each class one molecule. Typing for these polymorphisms is routinely done for b one marrow and kidney transplantation. Hundreds of HLA-A alleles have been described. [provid ed by RefSeq
Other Designations	HLA class I histocompatibility antigen, A-23 alpha chain|MHC class I antigen HLA-A heavy chain| MHC leukocyte antigen|OTTHUMP00000161059|antigen presenting molecule|leucocyte antigen c lass I|leukocyte antigen class I-A

Gene Info — KRAS

Entrez GeneID	3845
Protein Accession#	NP_002107.3(HLA-A*03:01) | P61769(B2M) | VVGAVGVGK
Gene Name	KRAS
Gene Alias	C-K-RAS, K-RAS2A, K-RAS2B, K-RAS4A, K-RAS4B, KI-RAS, KRAS1, KRAS2, NS3, RASK2
Gene Description	v-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
Omim ID	109800 114480 137215 190070 211980 218040 260350 609942
Gene Ontology	Hyperlink
Gene Summary	This gene, a Kirsten ras oncogene homolog from the mammalian ras gene family, encodes a prot ein that is a member of the small GTPase superfamily. A single amino acid substitution is respon sible for an activating mutation. The transforming protein that results is implicated in various malig nancies, including lung adenocarcinoma, mucinous adenoma, ductal carcinoma of the pancreas a nd colorectal carcinoma. Alternative splicing leads to variants encoding two isoforms that differ in the C-terminal region. [provided by RefSeq
Other Designations	K-ras p21 protein|Kirsten rat sarcoma-2 viral (v-Ki-ras2) oncogene homolog|PR310 c-K-ras onco gene|c-K-ras2 protein|c-Kirsten-ras protein|cellular c-Ki-ras2 proto-oncogene|oncogene KRAS2|tr ansforming protein p21|v-Ki-ras2 Kirsten rat sarcoma 2 viral oncoge

Pathway

- Acute myeloid leukemia

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- Allograft rejection
- Antigen processing and presentation
- Antigen processing and presentation
- Autoimmune thyroid disease
- Axon guidance
- B cell receptor signaling pathway
- Bladder cancer
- Cell adhesion molecules (CAMs)
- Chemokine signaling pathway
- Chronic myeloid leukemia
- Colorectal cancer
- Dorso-ventral axis formation
- Endocytosis
- Endometrial cancer
- ErbB signaling pathway
- Fc epsilon RI signaling pathway
- Gap junction
- Glioma
- GnRH signaling pathway
- Graft-versus-host disease
- Insulin signaling pathway
- Long-term depression
- Long-term potentiation
- MAPK signaling pathway
- Melanogenesis
- Melanoma

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- Natural killer cell mediated cytotoxicity
- Natural killer cell mediated cytotoxicity
- Neurotrophin signaling pathway
- Non-small cell lung cancer
- Pancreatic cancer
- Pathways in cancer
- Prostate cancer
- Regulation of actin cytoskeleton
- Renal cell carcinoma
- T cell receptor signaling pathway
- Thyroid cancer
- Tight junction
- Type I diabetes mellitus
- VEGF signaling pathway

Disease

- Abnormalities
- Abortion
- Abruptio Placentae
- Acquired Immunodeficiency Syndrome
- Acute Disease
- Acute Disease
- Addison Disease
- Adenocarcinoma
- Adenocarcinoma
- Adenoma

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- Adenomatous Polyposis Coli
- Adenovirus Infections
- Agranulocytosis
- AIDS-Related Opportunistic Infections
- Alcoholism
- Alcoholism
- Alopecia Areata
- Alveolar Bone Loss
- Alzheimer disease
- Anemia
- Anus Neoplasms
- Aortic Aneurysm
- Aortic Diseases
- Arterial Occlusive Diseases
- Arthritis
- Arthritis
- Asthma
- Atherosclerosis
- Autistic Disorder
- Autoimmune Diseases
- Autonomic Nervous System Diseases
- Behcet Syndrome
- Biliary Atresia
- Biliary Tract Neoplasms
- Bipolar Disorder

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- Birth Weight
- Brain Neoplasms
- Breast cancer
- Breast cancer
- Breast Neoplasms
- Breast Neoplasms
- Bronchiectasis
- Bronchiolitis
- Calcinosis
- Carcinoma
- Carcinoma
- Cardiomyopathy
- Cardiovascular Diseases
- Cardiovascular Diseases
- Celiac Disease
- Cell Transformation
- Cervical Intraepithelial Neoplasia
- Chagas Cardiomyopathy
- Chagas Disease
- Chlamydophila Infections
- Cholangiocarcinoma
- Cholangitis
- Choroidal Neovascularization
- Chromosomal Instability
- Chromosome Aberrations
- Chromosome Deletion

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- Chronic Disease
- Churg-Strauss Syndrome
- Cognition Disorders
- Colitis
- Colitis
- Colon cancer
- Colonic Neoplasms
- Colonic Polyps
- Colorectal Neoplasms
- Common Bile Duct Neoplasms
- Common Variable Immunodeficiency
- Complex Regional Pain Syndromes
- Conjunctivitis
- Connective Tissue Diseases
- Coronary Aneurysm
- Coronary Artery Disease
- Coronary Disease
- Crohn Disease
- Crohn Disease
- Cystadenocarcinoma
- Cytomegalovirus Infections
- Cytomegalovirus Retinitis
- Dengue
- Dermatitis
- Developmental Disabilities
- Diabetes Complications

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- Diabetes Mellitus
- Diabetes Mellitus
- Diarrhea
- Dilatation
- Disease
- Disease Progression
- Disease Progression
- Disease Susceptibility
- Down Syndrome
- Drug Eruptions
- Drug Hypersensitivity
- Drug Toxicity
- Drug Toxicity
- Drug-Induced Liver Injury
- Duchenne muscular dystrophy
- Duodenal Ulcer
- Dystonia
- Edema
- Encephalitis
- Encephalomyelitis
- Endometrial Hyperplasia
- Endometrial Neoplasms
- Endometriosis
- Endometriosis
- Enterovirus Infections
- Eosinophilia

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- Epidermal Necrolysis
- Epilepsy
- Epstein-Barr Virus Infections
- Esophageal Neoplasms
- Esophageal Neoplasms
- Exanthema
- Exanthema
- Eye Diseases
- Eye Infections
- Fibrosis
- Gastritis
- Gastritis
- Gastrointestinal Diseases
- Gastrointestinal Stromal Tumors
- Genetic Diseases
- Genetic Predisposition to Disease
- Genetic Predisposition to Disease
- Genetic Predisposition to Disease
- Genomic Instability
- Gingival Hemorrhage
- Glioblastoma
- Glioma
- Glioma
- Glomerulonephritis
- Graft vs Host Disease
- Graves Disease

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- Head and Neck Neoplasms
- Head and Neck Neoplasms
- Heart Defects
- Heart Failure
- Helicobacter Infections
- Hemangioma
- Hematologic Diseases
- Hematologic Neoplasms
- Hemochromatosis
- Hemoglobinuria
- Hemophilia A
- Hemophilia B
- Hemosiderosis
- Hepatitis
- Hepatitis A
- Hepatitis B
- Hepatitis C
- Hepatitis D
- Hereditary hemochromatosis
- Herpes Zoster
- Herpesviridae Infections
- Histoplasmosis
- HIV Infections
- HIV Infections
- HIV Seropositivity
- Hodgkin Disease

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- HTLV-I Infections
- Hyperplasia
- Hyperplasia
- Hypersensitivity
- Hypertension
- IgA Deficiency
- IgG Deficiency
- Immunologic Deficiency Syndromes
- Infection
- Infectious Mononucleosis
- Inflammation
- Inflammation
- Inflammatory Bowel Diseases
- Iron Overload
- Joint Diseases
- Keloid
- Kidney Diseases
- Kidney Failure
- Kidney Failure
- Kidney Failure
- Kidney Neoplasms
- Knee Injuries
- LEOPARD Syndrome
- Leprosy
- Leptospirosis
- Leukemia

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- Leukemia
- Leukemia-Lymphoma
- Lipodystrophy
- Liver Cirrhosis
- Liver Neoplasms
- Lung carcinoma
- Lung Neoplasms
- Lung Neoplasms
- Lupus Erythematosus
- Lymphatic Metastasis
- Lymphatic Metastasis
- Lymphoma
- Lymphoma
- Lymphoproliferative Disorders
- Macular Degeneration
- Malaria
- Malignant melanoma
- Melanoma
- Meningeal Neoplasms
- Meningeal Neoplasms
- Meningioma
- Meningioma
- Menkes syndrome
- Metabolic Syndrome X
- Microsatellite Instability
- Mouth Neoplasms

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- Mucocutaneous Lymph Node Syndrome
- Multiple Myeloma
- Multiple Sclerosis
- Muscular Dystrophy
- Myasthenia Gravis
- Mycobacterium avium-intracellulare Infection
- Myelodysplastic Syndromes
- Myoma
- Myositis
- Nasal Polyps
- Nasopharyngeal Neoplasms
- Nausea
- Necrosis
- Neoplasm Invasiveness
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Neoplasms
- Neovascularization
- Nephrosis
- Nephrotic Syndrome
- Nerve Sheath Neoplasms
- Neuralgia
- Neuroblastoma

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- Neurofibromatosis
- Neurofibromatosis 1
- Neuromyelitis Optica
- Neutropenia
- Noonan Syndrome
- Nut Hypersensitivity
- Obesity
- Obesity
- Occupational Diseases
- Optic Neuritis
- Oral Submucous Fibrosis
- Osteoarthritis
- Osteoporosis
- Ovarian cancer
- Ovarian cancer
- Ovarian Failure
- Ovarian Neoplasms
- Ovarian Neoplasms
- Pancreatic cancer
- Pancreatic cancer
- Pancreatic Neoplasms
- Pancreatic Neoplasms
- Pancreatitis
- Pancreatitis
- Papilloma
- Papillomavirus Infections
- Papillomavirus Infections

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- Paraneoplastic Syndromes
- Paraparesis
- Paraproteinemias
- Parkinson disease
- Paroxysmal nocturnal hemoglobinuria
- Pars Planitis
- Pemphigus
- Penile Induration
- Periodontal Attachment Loss
- Periodontitis
- Peritoneal Neoplasms
- Photosensitivity Disorders
- Pityriasis Rosea
- Polycystic Ovary Syndrome
- Polycystic Ovary Syndrome
- Porphyria
- Porphyria Cutanea Tarda
- Postoperative Complications
- Precancerous Conditions
- Pre-Eclampsia
- Pregnancy Complications
- Prostate cancer
- Prostatic Neoplasms
- Prostatic Neoplasms
- Proteinuria
- Psoriasis

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- Psychotic Disorders
- Puberty
- Pulmonary Disease
- Pulmonary Disease
- Pulmonary Embolism
- Pulmonary Valve Stenosis
- Purpura
- Ras oncogene
- Rectal Neoplasms
- Recurrence
- Recurrence
- Respiratory Tract Infections
- Retinal Neoplasms
- Retinoblastoma
- Retroperitoneal Fibrosis
- Rheumatic Diseases
- Rheumatic Heart Disease
- Salivary Gland Diseases
- Sarcoidosis
- Sarcoma
- Sarcoma
- Schizophrenia
- Severe Acute Respiratory Syndrome
- Sexually Transmitted Diseases
- Skin Abnormalities
- Skin Diseases

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- Skin Neoplasms
- Small Cell Lung Carcinoma
- Spinal Cord Diseases
- Spondylarthritis
- Spondylarthropathies
- Spondylitis
- Stevens-Johnson Syndrome
- Stomach Neoplasms
- Stomach Neoplasms
- Stomach Neoplasms
- Stomatitis
- Substance Abuse
- Syndrome
- Temporomandibular Joint Disorders
- Testicular Neoplasms
- Thromboembolism
- Thrombophilia
- Thrombophlebitis
- Thymoma
- Thymus Neoplasms
- Thyroid Diseases
- Thyroid Neoplasms
- Thyroiditis
- Tobacco Use Disorder
- Tonsillar Neoplasms
- Translocation

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- Tuberculosis
- Tumor Virus Infections
- Urinary Bladder Neoplasms
- Urticaria
- Uterine Cervical Neoplasms
- Uterine Neoplasms
- Uveitis
- Uveomeningoencephalitic Syndrome
- Venous Thrombosis
- Viremia
- Vitiligo
- Werner syndrome

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