

HUMAN SECRETED PROTEINS

FIELD OF THE INVENTION

[0001] The present invention relates to human secreted proteins/polypeptides, and isolated nucleic acid molecules encoding said proteins/polypeptides, useful for detecting, preventing, diagnosing, prognosticating, treating, and/or ameliorating cancer and other hyperproliferative disorders. Antibodies that bind these polypeptides are also encompassed by the present invention. Also encompassed by the invention are vectors, host cells, and recombinant and synthetic methods for producing said polynucleotides, polypeptides, and/or antibodies. The invention further encompasses screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further encompasses methods and compositions for inhibiting or enhancing the production and function of the polypeptides of the present invention.

BACKGROUND OF THE INVENTION

[0002] Cancer and other hyperproliferative disorders are a diverse group of disorders and diseases sharing one characteristic in common; all result from uncontrolled cell proliferation. The human body is composed of many different cell types, e.g. liver cells, muscle cells, brain cells, etc. Normally, these cells grow and divide to produce more cells only as the body needs them (e.g. to regenerate blood cells or replace epithelial cells lining the stomach). Sometimes, however, cells begin to divide unchecked even though new cells are not needed. These extra cells accumulate and form a mass of tissue, called a tumor. Although each of the over 200 cell types in the body can potentially become cancerous, some cell types become cancerous at relatively high rates while many other cell types rarely become cancerous.

[0003] Tumors are either benign or malignant. Benign tumors are not cancerous; they can usually be removed, they do not spread to other parts of the body and, they rarely threaten life. Malignant tumors, however, are cancerous. Cells in malignant tumors can invade and damage nearby or distant tissues and organs. The spread of cancerous cells is called metastasis. Malignant (or metastatic) cells can invade adjacent organs by proliferating directly from the primary tumor. Additionally, malignant cells can also metastasize to distant organs by breaking away from the primary tumor, entering the bloodstream or lymphatic system, and settling down in a new organ or tissue to produce a secondary tumor. The origin of secondary tumors is established by comparing cells comprising these tumors to cells in the original (primary) tumor.

[0004] In contrast to solid organ cancers (such as cancer in the liver, lung, and brain) cancer can also develop in blood-forming cells. These cancers are referred to as leukemias or lymphomas. Leukemia refers to cancer of blood forming cells such as red blood cells, platelets, and plasma cells. Lymphomas are a subset of leukemias, primarily involving white blood cells, in which the cancerous cells originated in, or are associated with, the lymph system and lymph organs (e.g. T-lymphocytes in the lymph nodes, spleen, or thymus).

[0005] In 1999 over 1.1 million people were newly diagnosed with 23 different types of cancer. The vast majority of these cases (~75%) involved cancers of the prostate, breast,

lung, colon, or urinary tract, or non-Hodgkin's lymphoma. Among the most fatal cancers are pancreatic, liver, esophageal, lung, stomach, and brain cancers, having up to 96% mortality rates depending on the specific cancer. In all, some 23 different types of cancer are expected to kill over 86,000 people each year.

[0006] Most cancers are treated with one or a combination therapies consisting of surgery, radiation therapy, chemotherapy, hormone therapy, and/or biological therapy. These five therapeutic modes are either local or systemic treatment strategies. Local treatments affect cancer cells in the tumor and immediately adjacent areas (for example, surgical tumor removal is a local treatment as are most radiation treatments). In contrast, systemic treatments travel through the bloodstream, and reach cancer and other cells all over the body. Chemotherapy, hormone therapy, and biological therapy are examples of systemic treatments.

[0007] Whether systemic or local, it is often difficult or impossible to protect healthy cells from the harmful effects of cancer treatment; healthy cells and tissues are inevitably damaged in the process of treating the cancerous cells. Damage and disruption of the normal functioning of healthy cells and tissues often produces the undesirable side effects experienced by patients undergoing cancer treatment.

[0008] Recombinant polypeptides and polynucleotides derived from naturally occurring molecules, as well as antibodies specifically targeted to these molecules, used alone or in conjunction with other existing therapies, hold great promise as improved therapeutic agents for the treatment of neoplastic disorders. Currently, most biological therapy can be classified as immunotherapy because these treatments often use naturally occurring molecules to assist the body's immune system in fighting the disease or in protecting the body from side effects of other cancer treatment(s). Among the most commonly used compounds in biological therapies are proteins called cytokines (e.g. interferons, interleukins, and colony stimulating factors) and monoclonal antibodies (targeted to particular cancer cells). Side effects caused by these commonly used biological therapies range from flu-like symptoms (chills, fever, muscle aches, weakness, loss of appetite, nausea, vomiting, and diarrhea) to rashes, swelling, easy bruising, or bleeding. **[text missing or illegible when filed]** eted proteins associated with initiation, progression, **[text missing or illegible when filed]** of neoplastic diseases (including antibodies that **[text missing or illegible when filed]** eptides), satisfies a need in the art by providing new **[text missing or illegible when filed]** on, prevention, diagnosis, treatment, prevention, **[text missing or illegible when filed]** iferative disorders.

SUMMARY OF THE INVENTION

[0009] **[text missing or illegible when filed]** ases human secreted proteins/polypeptides, and isolated **[text missing or illegible when filed]** proteins/polypeptides, useful for detecting, preventing, **[text missing or illegible when filed]** ad/or ameliorating cancer and other hyperproliferative **[text missing or illegible when filed]** lypeptides are also encompassed by the present invention; **[text missing or illegible when filed]** omainant and synthetic methods for producing said **[text missing or illegible when filed]** ntibodies. The invention further encompasses screening **[text missing or illegible when filed]** antagonists of polynucleotides and polypeptides of