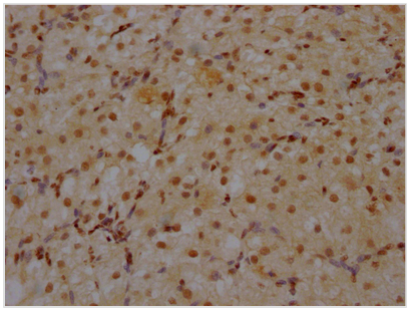
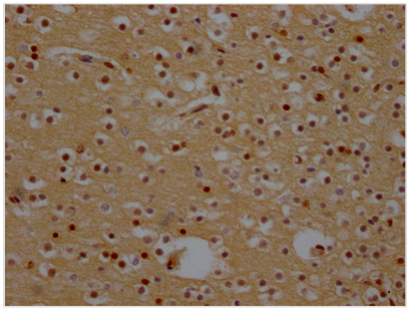
XPO1 Recombinant Monoclonal Antibody

Product Code	CSB-RA930964A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O14980
Immunogen	A synthesized peptide derived from human CRM1
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	Mediates the nuclear export of cellular proteins (cargos) bearing a leucine-rich nuclear export signal (NES) and of RNAs. In the nucleus, in association with RANBP3, binds cooperatively to the NES on its target protein and to the GTPase RAN in its active GTP-bound form (Ran-GTP). Docking of this complex to the nuclear pore complex (NPC) is mediated through binding to nucleoporins. Upon transit of a nuclear export complex into the cytoplasm, disassembling of the complex and hydrolysis of Ran-GTP to Ran-GDP (induced by RANBP1 and RANGAP1, respectively) cause release of the cargo from the export receptor. The directionality of nuclear export is thought to be conferred by an asymmetric distribution of the GTP- and GDP-bound forms of Ran between the cytoplasm and nucleus. Involved in U3 snoRNA transport from Cajal bodies to nucleoli. Binds to late precursor U3 snoRNA bearing a TMG cap. Several viruses, among them HIV-1, HTLV-1 and influenza A use it to export their unspliced or incompletely spliced RNAs out of the nucleus. Interacts with, and mediates the nuclear export of HIV-1 Rev and HTLV-1 Rex proteins. Involved in HTLV-1 Rex multimerization.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Signal transduction
Gene Names	XPO1
Clone No.	9F2
Image	



IHC image of CSB-RA930964A0HU diluted at 1:100 and staining in paraffin-embedded human ovarian tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA930964A0HU diluted at 1:100 and staining in paraffin-embedded human brain tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The XPO1 recombinant monoclonal antibody is produced through four steps: firstly, the XPO1 monoclonal antibody gene is sequenced, then the gene is inserted into a plasmid vector, next the recombinant vector is introduced into a host cell line, and finally the XPO1 recombinant monoclonal antibody is purified using affinity chromatography from the cell culture supernatant. The immunogen used to produce the XPO1 monoclonal antibody is a synthesized peptide derived from human XPO1. The XPO1 recombinant monoclonal antibody is useful in ELISA and IHC applications for the detection of human XPO1 protein.

The XPO1 protein, also known as Exportin-1 or CRM1, plays a critical role in the nucleocytoplasmic transport of proteins and RNA molecules. Specifically, it mediates the export of proteins with a leucine-rich nuclear export signal (NES) from the nucleus to the cytoplasm. These NES-containing proteins are involved in a variety of cellular processes, including cell cycle regulation, DNA damage response, and apoptosis. In addition, XPO1 also exports several important RNA molecules, such as microRNAs and tRNAs, from the nucleus to the cytoplasm. Dysregulation of XPO1 activity has been implicated in various diseases, including cancer and viral infections.