

ERAP1 Antibody
Catalog # ASC11694**Specification**

ERAP1 Antibody - Product Information

Application	WB, IHC, IF
Primary Accession	Q9NZ08
Other Accession	NP_057526 , 94818901
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 104 kDa
Application Notes	Observed: 105kDa KDa ERAP1 antibody can be used for detection of ERAP1 by Western blot at 1 - 2 µg/ml.

ERAP1 Antibody - Additional Information

Gene ID 51752

Target/Specificity

ERAP1; ERAP1 antibody is human and mouse reactive. At least two isoforms of ERAP1 are known to exist; this antibody will detect both isoforms. ERAP1 antibody is predicted to not cross-react with ERAP2.

Reconstitution & Storage

ERAP1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

ERAP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ERAP1 Antibody - Protein Information**Name** ERAP1**Synonyms** APPILS, ARTS1, KIAA0525**Function**

Aminopeptidase that plays a central role in peptide trimming, a step required for the generation of most HLA class I-binding peptides. Peptide trimming is essential to customize longer precursor peptides to fit them to the correct length required for presentation on MHC class I molecules. Strongly prefers substrates 9-16 residues long. Rapidly degrades 13-mer to a 9-mer and then stops. Preferentially hydrolyzes the residue Leu and peptides with a hydrophobic C-terminus, while it has weak activity toward peptides with charged C-terminus. May play a role in the inactivation of peptide hormones. May be involved in the regulation of blood pressure through the inactivation of angiotensin II and/or the generation of bradykinin in the kidney.

Cellular Location

Endoplasmic reticulum membrane; Single-pass type II membrane protein

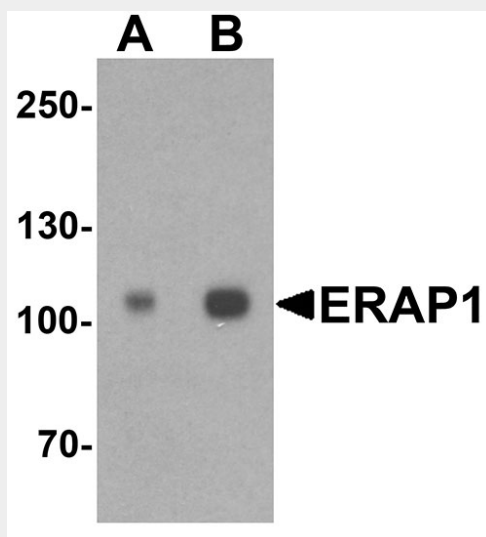
Tissue Location

Ubiquitous.

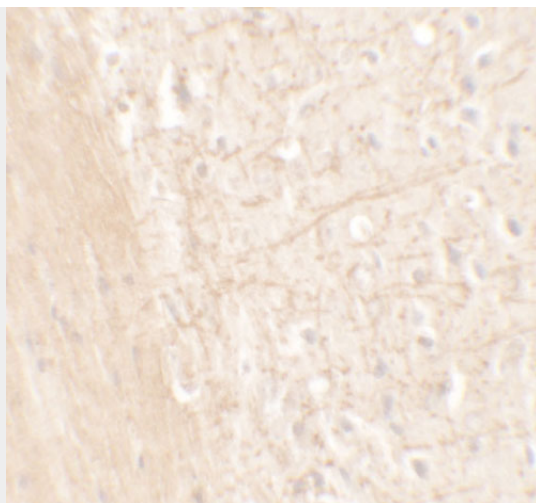
ERAP1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

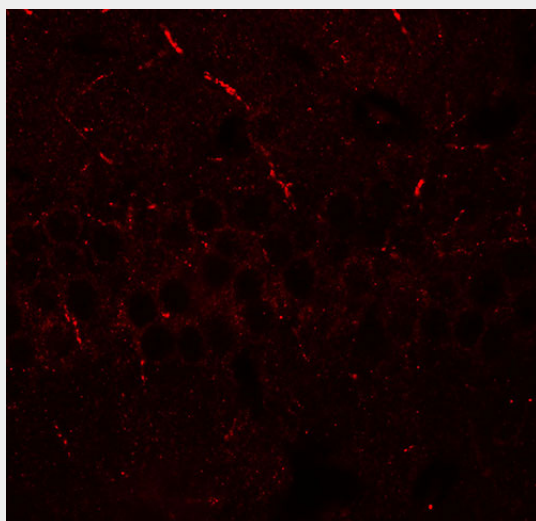
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ERAP1 Antibody - Images

Western blot analysis of ERAP1 in SK-N-SH cell lysate with ERAP1 antibody at (A) 1 and (B) 2 µg/ml.



Immunohistochemistry of ERAP1 in mouse brain tissue with ERAP1 antibody at 5 µg/mL.



Immunofluorescence of ERAP1 in mouse brain tissue with ERAP1 antibody at 20 µg/mL.

ERAP1 Antibody - Background

The endoplasmic reticulum (ER) aminopeptidase 1 (ERAP1), a member of the peptidase M1 family, plays a central role in peptide trimming, a step required for the generation of most HLA class I-binding peptides (1,2). It is also designated as adipocyte-derived leucine aminopeptidase (A-LAP), puromycin-insensitive leucine-specific aminopeptidase (PILS-AP) and aminopeptidase regulator of TNFR1 shedding (ARTS-1) (3). ERAP1 is localized to the lumen of the ER and induced by interferon. It may be involved in the regulation of blood pressure through the inactivation of angiotensin II and/or the generation of bradykinin in the kidney (3,4).

ERAP1 Antibody - References

Hattori A, Kitatani K, Matsumoto H, et al. Characterization of recombinant human adipocytederived leucine aminopeptidase expressed in Chinese hamster ovary cells. *J. Biochem.* 2000; 128:755-62.
Saric T, Chang SC, Hattori A, et al. An IFN-gamma induced aminopeptidase in the ER, ERAP1, trims precursors to MHC class I-presented peptides. *Nat. Immunol.* 2002; 3:1169-76.
Cui X, Hawari F, Alsaaty S, et al. Identification of ARTS-1 as a novel TNFR1-binding protein that promotes TNFR1 ectodomain shedding. *J. Clin. Invest.* 2002; 110:515-26.
Akada T, Yamazaki T, Miyashita H, et al. Puromycin insensitive leucyl-specific aminopeptidase (PILSAP) is involved in the activation of endothelial integrins. *J. Cell Physiol.* 2002; 193: 253-62.