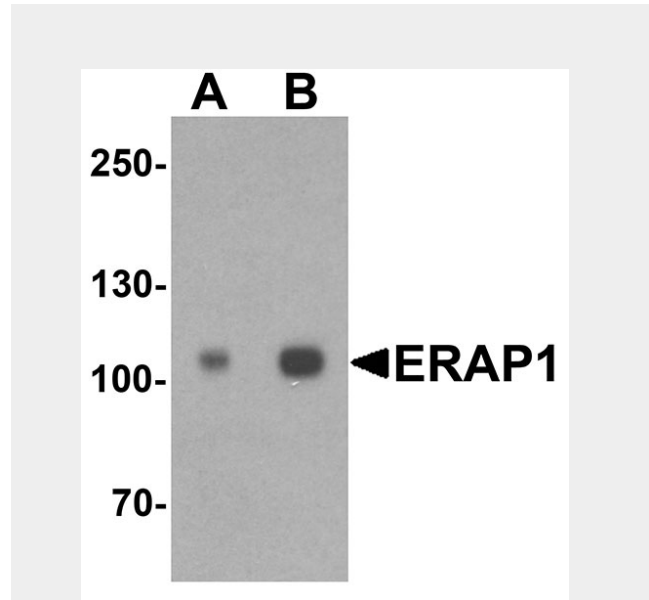


ERAP1 Antibody
Catalog # ASC11694

Specification

ERAP1 Antibody - Product Information

Application	WB, IHC, IF
Primary Accession	O9NZ08
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.



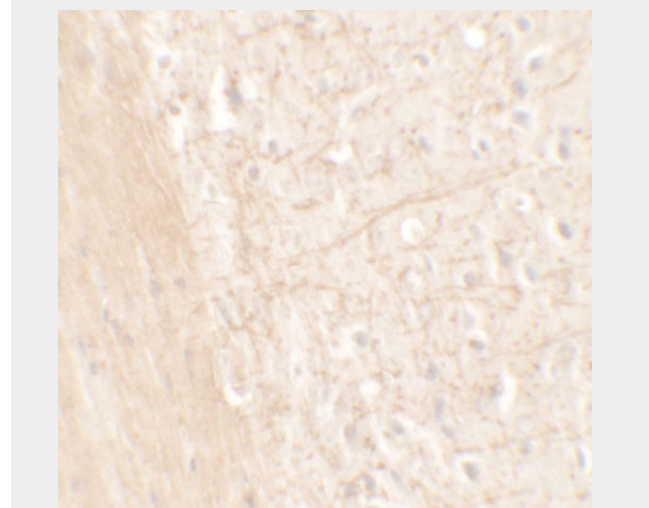
Western blot analysis of ERAP1 in SK-N-SH cell lysate with ERAP1 antibody at (A) 1 and (B) 2 µg/ml.

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.



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

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

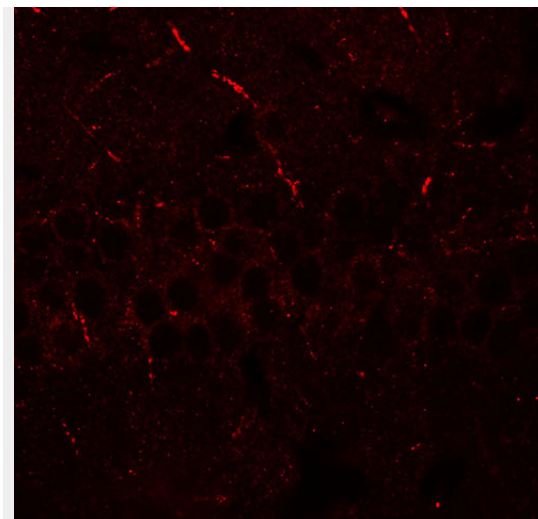
Tissue Location

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](#)



Immunofluorescence of ERAP1 in mouse brain tissue with ERAP1 antibody at 20 $\mu\text{g/mL}$.

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.