Anti-ESD Antibody [J0-8-R]

HA601305

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB
Molecular Wt:	Predicted band size: 31 kDa
Clone number:	J0-8-R

Description: ESD (esterase D) is also known as S-formylglutathione hydrolase and is a 282 amino acid protein that is a member of the esterase D family. ESD is highly expressed in placenta, kidney, liver and erythrocytes, and is localized to the cytoplasm, as well as to cytoplasmic vesicles. The main function of ESD is to detoxify formaldehyde while providing energy. Formaldehyde is oxidized by ADH5 which yields S-formylglutathione. ESD then catalyzes the hydrolysis of S-formylglutathione to the reduced forms of formic acid and glutathione. In addition, ESD hydrolyzes a variety of different neutral ester substrates and can act as a carboxylesterase. ESD may also act as a cysteine hydrolase which is inactivated by thiol alkylating agents. ESD gene polymorphism can lead to reduced enzymatic activity which may cause susceptibility to many conditions, including toxic liver cirrhosis, retinoblastoma, obesity and autism.

Immunogen: Recombinant protein within Human ESD aa 1-182 / 282.

Positive control: K-562 cell lysate, Jurkat cell lysate, HeLa cell lysate, HepG2 cell lysate, SW480 cell lysate, human kidney tissue lysate, mouse kidney tissue lysate, mouse colon tissue lysate, mouse stomach tissue lysate, rat kidney tissue lysate, rat colon tissue lysate, rat stomach tissue lysate.

Subcellular location: Cytoplasm. Cytoplasmic vesicle.

Database links: SwissProt: P10768 Human | Q9R0P3 Mouse | B0BNE5 Rat

Recommended Dilutions:

WB	1:1,000-1:20,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

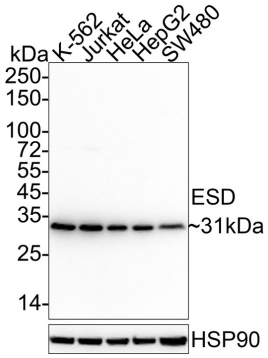

Fig1: Western blot analysis of ESD on different lysates with Mouse anti-ESD antibody (HA601305) at 1/1,000 dilution.

Lane 1: K-562 cell lysate
Lane 2: Jurkat cell lysate
Lane 3: HeLa cell lysate
Lane 4: HepG2 cell lysate
Lane 5: SW480 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 31 kDa
Observed band size: 31 kDa

Exposure time: 1 minute 13 seconds;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601305) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

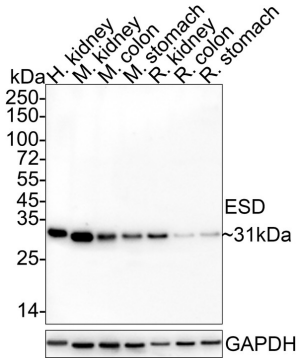

Fig2: Western blot analysis of ESD on different lysates with Mouse anti-ESD antibody (HA601305) at 1/2,000 dilution.

Lane 1: Human kidney tissue lysate
Lane 2: Mouse kidney tissue lysate
Lane 3: Mouse colon tissue lysate
Lane 4: Mouse stomach tissue lysate
Lane 5: Rat kidney tissue lysate
Lane 6: Rat colon tissue lysate
Lane 7: Rat stomach tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 31 kDa
Observed band size: 31 kDa

Exposure time: 1 minute 18 seconds;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601305) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

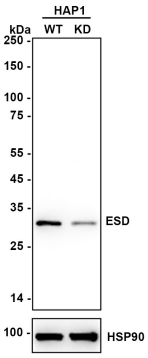

Fig3: Western blot analysis of ESD on different lysates with Mouse anti-ESD antibody (HA601305) at 1/20,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-ESD KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 31 kDa
Observed band size: 31 kDa

Exposure time: 10 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601305) at 1/20,000 dilution was used in K1803 at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

Background References

1. Li W et al. Esterase D enhances type I interferon signal transduction to suppress foot-and-mouth disease virus replication. Mol Immunol 75:112-21 (2016).
2. Kaźmierczak M et al. Esterase D and gamma 1 actin level might predict results of induction therapy in patients with acute myeloid leukemia without and with maturation. Med Oncol 30(4):725 (2013).