



Rabbit Anti-STEP antibody

SL11328R

Product Name:	STEP
Chinese Name:	神经特异蛋白酪氨酸磷酸酶N5抗体
Alias:	PTPN5; Neural specific protein tyrosine phosphatase; Neural-specific protein-tyrosine phosphatase; Protein tyrosine phosphatase non receptor type 5 (striatum enriched); Protein tyrosine phosphatase non receptor type 5; Protein tyrosine phosphatase striatum enriched; PTN5; PTN5_HUMAN; PTP STEP; PTPN 5; Ptpn5; PTPSTEP; Striatum-enriched protein-tyrosine phosphatase; Tyrosine protein phosphatase non receptor type 5; Tyrosine-protein phosphatase non-receptor type 5; FLJ14427.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Rabbit,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	63kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human PTPN5:201-300/565
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The brain-specific STEP (striatal enriched phosphatase) family of protein tyrosine phosphatases (PTPs) comprises both transmembrane and cytosolic protein members

which are the products of alternative splicing. STEP family members are expressed in the dopaminergic neurons of the CNS, with highest expression in the basal ganglia and related structures. The STEP protein regulates the N-methyl-d-aspartate receptor (NMDAR) complex; STEP depresses both NMDAR single-channel activity and synaptic currents. The membrane-associated STEP61 isoform localizes in the postsynaptic densities (PSDs) of striatal neurons. STEP61 contains a single tyrosine phosphatase domain, two proline-rich domains and two transmembrane domains. The STEP61 protein associates with the Src family kinase member Fyn when Fyn is phosphorylated at Tyr-420 and not Tyr-431. Upon association, STEP61 dephosphorylates Tyr-420 residue and may thus regulate Fyn activity in PSDs. Isolated from mouse brain, the STEP20 isoform lacks the conserved tyrosine phosphatase domain. The human STEP gene maps to chromosome 11p15.2-p15.1.

Function:

May regulate the activity of several effector molecules involved in synaptic plasticity and neuronal cell survival, including MAPKs, Src family kinases and NMDA receptors.

Subcellular Location:

Cellular localization Endoplasmic reticulum membrane.

Post-translational modifications:

Phosphorylation at Ser-245 by PKA deactivates PTPN5. Phosphorylation at Thr-255 and Ser-268 by MAPKs stabilizes the phosphatase, dephosphorylation of these sites results in ubiquitin-mediated degradation of the active phosphatase.

Similarity:

Belongs to the protein-tyrosine phosphatase family. Non-receptor class subfamily. Contains 1 tyrosine-protein phosphatase domain.

SWISS:

P54829

Gene ID:

84867

Database links:

[Entrez Gene: 615850](#)Cow

[Entrez Gene: 84867](#)Human

[Entrez Gene: 19259](#)Mouse

[Entrez Gene: 29644](#)Rat

[Omim: 176879](#)Human

[SwissProt: P54829](#)Human

[SwissProt: P54830](#)Mouse

[SwissProt: P35234](#)Rat

[Unigene: 79092](#)Human

[Unigene: 4654](#)Mouse

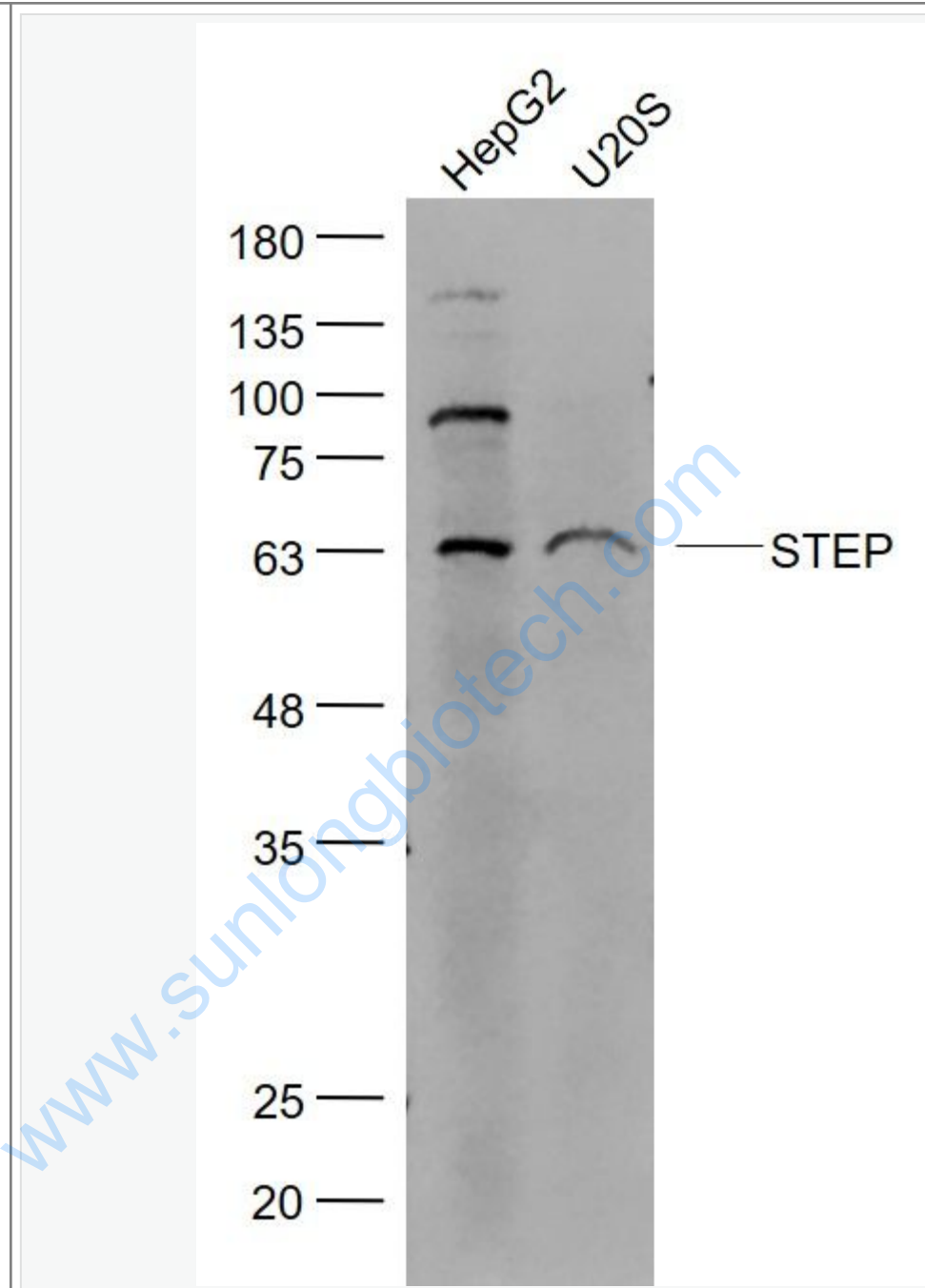
[Unigene: 10618](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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Picture:



Sample:

HepG2(Human) Cell Lysate at 30 ug

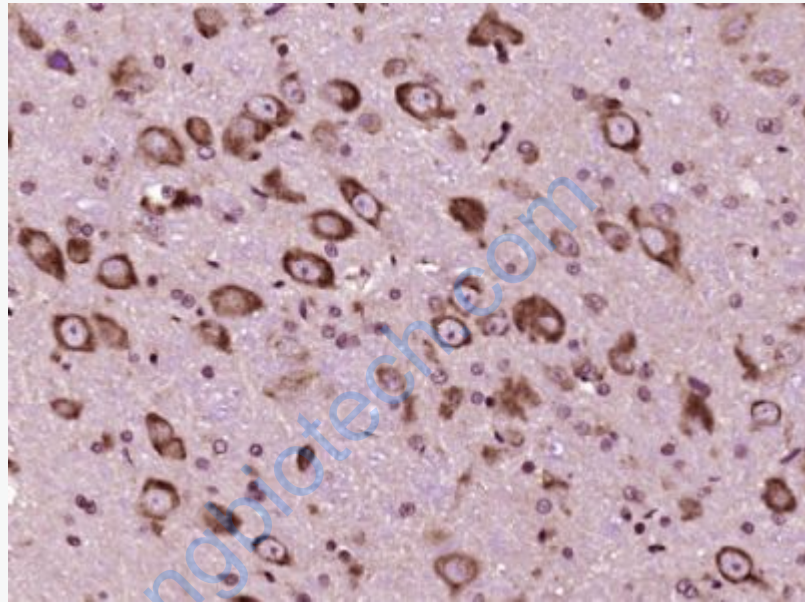
U2OS(Human) Cell Lysate at 30 ug

Primary: Anti- STEP (SL11328R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 63 kD

Observed band size: 63 kD



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (STEP) Polyclonal Antibody, Unconjugated (SL11328R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.