

CD117/c-Kit Protein, Mouse (523a.a, HEK293, Fc)

Cat. No.:	HY-P72879
Synonyms:	Mast/stem cell growth factor receptor Kit; SCFR; CD117; Kit; Sl
Species:	Mouse
Source:	HEK293
Accession:	P05532 (S25-T523)
Gene ID:	16591
Molecular Weight:	100-120 kDa

PROPERTIES

AA Sequence

S Q P S A S P G E P	S P P S I H P A Q S	E L I V E A G D T L	S L T C I D P D F V
R W T F K T Y F N E	M V E N K K N E W I	Q E K A E A T R T G	T Y T C S N S N G L
T S S I Y V F V R D	P A K L F L V G L P	L F G K E D S D A L	V R C P L T D P Q V
S N Y S L I E C D G	K S L P T D L T F V	P N P K A G I T I K	N V K R A Y H R L C
V R C A A Q R D G T	W L H S D K F T L K	V R A A I K A I P V	V S V P E T S H L L
K K G D T F T V V C	T I K D V S T S V N	S M W L K M N P Q P	Q H I A Q V K H N S
W H R G D F N Y E R	Q E T L T I S S A R	V D D S G V F M C Y	A N N T F G S A N V
T T T L K V V E K G	F I N I S P V K N T	T V F V T D G E N V	D L V V E Y E A Y P
K P E H Q Q W I Y M	N R T S A N K G K D	Y V K S D N K S N I	R Y V N Q L R L T R
L K G T E G G T Y T	F L V S N S D A S A	S V T F N V Y V N T	K P E I L T Y D R L
I N G M L Q C V A E	G F P E P T I D W Y	F C T G A E Q R C T	T P V S P V D V Q V
Q N V S V S P F G K	L V V Q S S I D S S	V F R H N G T V E C	K A S N D V G K S S
A F F N F A F K G N	N K E Q I Q A H T		

Biological Activity Measured by its binding ability in a functional ELISA. When Recombinant Mouse CD117 is present at 0.5 µg/mL, can bind Biotinylated Recombinant Mouse SCF/c-kit Ligand. The ED₅₀ for this effect is 30.7 ng/mL.

Appearance Lyophilized powder

Formulation Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The CD117/c-Kit protein is a tyrosine-protein kinase that serves as a cell-surface receptor for the cytokine KITLG/SCF. It plays a crucial role in regulating cell survival and proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration, function, and melanogenesis. Upon binding to KITLG/SCF, CD117/c-Kit activates multiple signaling pathways, including PI3K/AKT, GRB2/RAS/RAF/MAPK, and STAT. This leads to the phosphorylation of various downstream effectors such as PIK3R1, PLCG1, SH2B2/APS, CBL, and transcription factors STAT1, STAT3, STAT5A, and STAT5B. Activation of PLCG1 results in the production of diacylglycerol and inositol 1,4,5-trisphosphate, important cellular signaling molecules. CD117/c-Kit signaling is regulated by protein phosphatases, rapid internalization, and degradation of the receptor. Additionally, it promotes the phosphorylation of PTPN6/SHP-1, PTPRU, and other proteins like CRK, LYN, SRC, and SHC1.

Caution: Product has not been fully validated for medical applications. For research use only.

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