



碧云天生物技术/Beyotime Biotechnology  
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## Recombinant Active Human BACE1 (His-Tag)

产品编号	产品名称	包装
P2520-10µg	Recombinant Active Human BACE1 (His-Tag)	10µg
P2520-100µg	Recombinant Active Human BACE1 (His-Tag)	100µg
P2520-1mg	Recombinant Active Human BACE1 (His-Tag)	1mg

### 产品简介:

Species	Gene ID	Accession	Source	Length	MW	Tag
Human	23621	P56817	HEK293	411aa	~46kDa	C-His Tag

蛋白信息(About this protein)	
名称(Name)	Recombinant Active Human BACE1 (His-Tag), 重组活性人源BACE1(His标签)或β-分泌酶1酶活结构域
别名(Synonyms)	β-分泌酶1; Beta-Secretase 1; Beta-site amyloid precursor protein cleaving enzyme 1; Beta-site APP cleaving enzyme 1 (BACE1); Aspartyl protease 2 (ASP2); Memapsin-2; Membrane-associated aspartic protease 2; APP beta secretase; Aspartic-like protease 56 kDa; HSPC104; BACE-1
产品简介 (Background)	<p>Beyotime's recombinant active form of human BACE1 (rhBACE1) contain the mature extracellular protease domain (Glu46-Thr457) with a His tag (8X His) at the C-terminus. This protein was expressed in HEK293 cells and purified. The signal peptide (Met1-Gly21), propeptide (The22-Arg45), transmembrane domain (Thr458-Cys478) and cytoplasmic domain (Gln479-Lys501) of human BACE1 was removed during construct. The rhBACE1 consists of 420aa with 2 active sites (Asp93 and Asp289), which has a calculated molecular mass of 46kDa. Due to 4 N-glycosylation sites (Asn153, Asn172, Asn223 and Asn354) of rhBACE1, it migrates as an approximately 66kDa protein in SDS-PAGE gel under reducing conditions.</p> <p>BACE1 is an aspartic protease and an integral membrane protein. It is the peptidase predominantly responsible for cleavage of the amyloid precursor protein beta site to generate the amyloid beta peptide (Aβ) in the brain. Because the Aβ is a major component of amyloid plaques, BACE1 has been implicated in the onset and/or progression of Alzheimer's disease. BACE1 is expressed in a variety of human tissues. It is likely that this peptidase has functions in addition to its hydrolysis of the amyloid precursor protein. The peptidase activity of BACE1 is optimal under mildly acidic conditions (pH3.5-5.5), consistent with its proposed function in an acidic intracellular compartment [1-3].</p>
产品用途 (Applications)	Active human BACE1 is useful in studying enzyme regulation, determining target substrates, screening BACE1 inhibitors or as a positive control in BACE1 activity assays.
外观 (Physical appearance)	Liquid
活性 (Biological activity)	≥ 20U/µg
活力单位 (Unit definition)	One unit is defined as the amount of enzyme that produces 1pmol/min MCA by hydrolyzing the substrate MCA-EIDLMVLDK-Dnp at 37°C. EIDLMVLD is the most efficient known substrate of BACE1 [4].
浓度 (Concentration)	1mg/ml
纯度(Purity)	≥ 95% by SDS-PAGE
储存液 (Storage buffer)	20mM HEPES (pH7.2), 150mM NaCl, 0.01% Tween 80
使用方法 (Recommended usage)	The amount of 0.1-1µg rhBACE1 is recommended used in each assay (50-200µl) for BACE1 inhibitors screening.

➤ 本产品经SDS-PAGE电泳检测蛋白纯度和分子量参考图1。

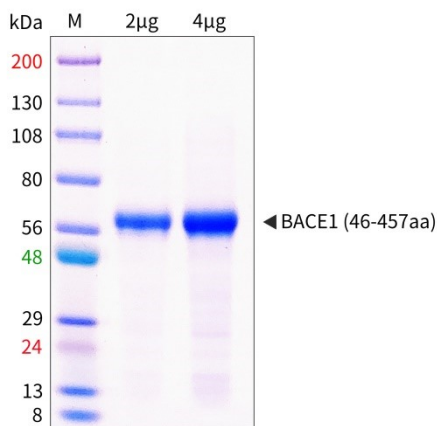


图1. 碧云天Recombinant Active Human BACE1 (His-Tag) (P2520)的SDS-PAGE电泳检测效果图。本蛋白经BeyoGel™ Plus PAGE预制胶(Hepes, 4-20%, 10孔) (P0523)电泳, marker为BeyoColor™彩色预染蛋白分子量标准(6.5-270kD) (P0071/P0072), 并经BeyoBlue™考马斯亮蓝超快染色液(P0017F)染色。实际检测结果可能会因样品和检测条件等的不同而存在差异, 图中数据仅供参考。

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P2520-100µg	Recombinant Active Human BACE1 (His-Tag)	100µg
P2520-1mg	Recombinant Active Human BACE1 (His-Tag)	1mg
—	说明书	1份

### 保存条件:

-20°C保存, 一年有效。-80°C保存, 可以保存更长时间。

### 注意事项:

- 由于蛋白的每次冻融均会引起部分失活, 所以首次配制成相应浓度的储存液后, 须分装后-20°C或更低温度冻存, 尽量避免反复冻融。
- 本产品仅限于专业人员的科学研究用, 不得用于临床诊断或治疗, 不得用于食品或药品, 不得存放于普通住宅内。
- 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

### 使用说明:

1. 收到产品后请立即按照说明书推荐的条件保存。在打开管盖前, 请适当离心, 使附着在管盖或管壁上的蛋白聚集于管底。
2. 具体的最佳工作浓度请自行参考相关文献, 或者根据实验目的, 通过实验进行摸索和优化。

### 参考文献:

1. Dislich B, Lichtenthaler SF. Front Physiol. 2012. 17;3:8.
2. Sathya M, Premkumar P, Karthick C, et al. Clinica chimica acta. 2012. 414: 171-178.
3. Yan R, Bienkowski MJ, Shuck ME, Miao H, Tory MC, et al. Nature. 1999. 402(6761):533-7.
4. Hunt CE, Turner AJ. FEBS J. 2009. 276(7):1845-59.

### 相关产品:

产品编号	产品名称	包装
P0362S	β-Secretase 1 (BACE1)活性荧光检测试剂盒	100次
P0362M	β-Secretase 1 (BACE1)活性荧光检测试剂盒	500次
P0363S	β-Secretase 1 (BACE1)抑制剂筛选试剂盒	100次
P0363M	β-Secretase 1 (BACE1)抑制剂筛选试剂盒	500次
P2520-10µg	Recombinant Active Human BACE1 (His-Tag)	10µg
P2520-100µg	Recombinant Active Human BACE1 (His-Tag)	100µg
P2520-1mg	Recombinant Active Human BACE1 (His-Tag)	1mg
P9739-0.5ml	MCA-EIDLMLVDK-Dnp (BACE1荧光底物)	2mM×0.5ml
P9739-5mg	MCA-EIDLMLVDK-Dnp (BACE1荧光底物)	5mg
P9739-25mg	MCA-EIDLMLVDK-Dnp (BACE1荧光底物)	25mg
SF1183-10mM	Verubecestat (MK-8931) (BACE1/2抑制剂)	10mM×0.2ml

SF1183-5mg	Verubecestat (MK-8931) (BACE1/2抑制剂)	5mg
SF1183-25mg	Verubecestat (MK-8931) (BACE1/2抑制剂)	25mg
SF1183-100mg	Verubecestat (MK-8931) (BACE1/2抑制剂)	100mg

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