

ProQinase™ BMPR1A

bone morphogenetic protein receptor type 1A

Recombinant Human Active Protein Kinase

HGNC Symbol: BMPR1A

Synonyms: ACVRLK3, ALK3, CD292, SKR5

Product No.: 1655-0000-1

Lot: 007

Description: Human BMPR1A, C-terminal fragment, amino acids K₁₇₇-I₅₃₂ (as in [NCBI/Protein](#) entry NP_004320.2), untagged, expressed in Sf9 insect cells

Product identity: BMPR1A Lot 007, was confirmed as BMPR1A by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 41,166 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20 % glycerol

Storage temperature: -80°C

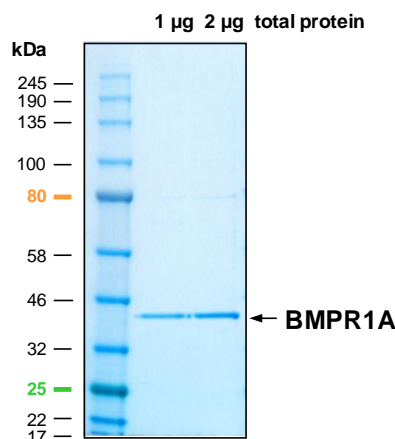
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.128 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

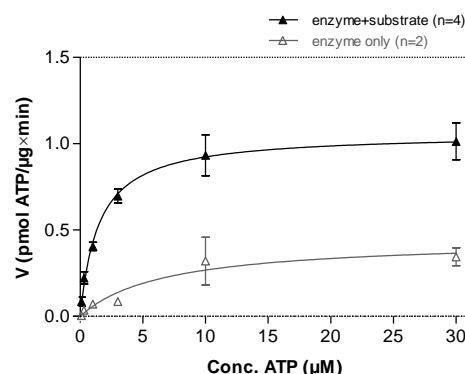
Biochemical Parameters:

Specific kinase activity (P_i transfer): 1.1 pmol/µg × min
ATP-K_M: 1.5 µM

BMPR1A Lot 007: Coomassie stain



BMPR1A Lot 007: Determination of V_{max} and K_M value for ATP



- Assay conditions:
60 mM HEPES-NaOH, pH 7.5
3 mM MgCl₂
3 mM MnCl₂
3 µM Na-orthovanadate
1.2 mM DTT
50 µg/ml PEG_{20,000}
ATP (variable)
Substrate: Casein 20 µg/ml
Kinase: 4 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

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BMPR1A Recombinant Fusion Protein Amino Acid Sequence

1	GPLAMVKHYC	KSISSRRRYN	RDLEQDEAFI	PVGESLKDLI	DQSQSSGSGS	GLPLLVRTI	60
61	AKQIQMVRQV	GKGRYGEVWM	GKWRGEKAV	KVFFTTEEAS	WPRETEIYQT	VLMRHENILG	120
121	FIAADIKGTG	SWTQLYLITD	YHENGSLYDF	LKCATLDTRA	LLKLAYSAC	GLCHLHTEIY	180
181	GTQGKPAIAH	RDLKSKNILI	KKNGSCCIAD	LGLAVKFNSD	TNEVDVPLNT	RVGTKRYMAP	240
241	EVLDES LNKN	HFQPYIMADI	YSFGLIIWEM	ARRCITGGIV	EYQLPYNYM	VPSDPSYEDM	300
301	REVVCVKRLR	PIVSNRWNSD	ECLRAVLKLM	SECWAHPAS	RLTALRIKKT	LAKMVESQDV	360
361	KI						420

1-6: legacy of tag cleavage **blue**: BMPR1A fragment

BMPR1A wt¹ Amino Acid Sequence

1	MPQLYIYIRL	LGAYLFIISR	VQGQNLDSML	HGTGMKSDSD	QKSENGVTL	APEDTLPFLK	60
61	CYCSGHCPDD	AINNTCITNG	HCFAIIEEDD	QGETTLASGC	MKYEGSDFQC	KDSPKAQLRR	120
121	TIECCRTNLC	NQYLQPTLPP	VVIGPFFDGS	IRWLVLISM	AVCIAMIIF	SSFCYKHYC	180
181	KSISSRRRYN	RDLEQDEAFI	PVGESLKDLI	DQSQSSGSGS	GLPLLVRTI	AKQIQMVRQV	240
241	GKGRYGEVWM	GKWRGEKAV	KVFFTTEEAS	WPRETEIYQT	VLMRHENILG	FIAADIKGTG	300
301	SWTQLYLITD	YHENGSLYDF	LKCATLDTRA	LLKLAYSAC	GLCHLHTEIY	GTQGKPAIAH	360
361	RDLKSKNILI	KKNGSCCIAD	LGLAVKFNSD	TNEVDVPLNT	RVGTKRYMAP	EVLDES LNKN	420
421	HFQPYIMADI	YSFGLIIWEM	ARRCITGGIV	EYQLPYNYM	VPSDPSYEDM	REVVCVKRLR	480
481	PIVSNRWNSD	ECLRAVLKLM	SECWAHPAS	RLTALRIKKT	LAKMVESQDV	KI	540

blue: BMPR1A sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_004320.2