

## Integrin alpha A1 beta 1 Protein, Mouse (HEK293, His)

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|-------------------|---|
| Cat. No.:         | HY-P700757  |
| Synonyms:         | Integrin alpha A1 beta 1; alpha A1 beta 1; alpha A1; beta 1; ITGA1&ITGB1; ITGA&ITGB; Integrin alpha A1 $\beta$ 1; alpha A1 $\beta$ 1; $\beta$ 1 |
| Species:          | Mouse   |
| Source:           | HEK293  |
| Accession:        | Q3V3R4 (F29-P1141)&P09055-1 (Q21-D728)  |
| Gene ID:          | 109700  |
| Molecular Weight: | 140-200 kDa (ITGA1) & 100-115 kDa (ITGB1)   |

### PROPERTIES

|                     |  |
|---------------------|--|
| Appearance          | Lyophilized powder.  |
| Formulation         | Lyophilized from a 0.22 $\mu$ m filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.  |
| Endotoxin Level     | <1 EU/ $\mu$ g, determined by LAL method.  |
| Reconstitution      | It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.   |
| 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

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|------------|---|
| Background | The Integrin alpha-1/beta-1 protein functions as a receptor for both laminin and collagen, recognizing the proline-hydroxylated sequence G-F-P-G-E-R within collagen. Integral to anchorage-dependent processes, it negatively regulates EGF-stimulated cell growth. Forming a heterodimeric complex, Integrin alpha-1 associates with beta-1, and it interacts with the small GTPase RAB21. Moreover, through its cytoplasmic domain, Integrin alpha-1/beta-1 engages with PTPN2, activating the phosphatase activity of PTPN2 towards EGFR and thereby exerting a negative regulatory influence on EGF signaling pathways. These multifaceted interactions underscore Integrin alpha-1/beta-1's role in orchestrating cellular responses to the extracellular matrix and growth factor signaling. |
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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